

IMPACTS OF THE COVID-19 PANDEMIC ON SIDS AND THEIR BIODIVERSITY



FINAL REPORT

PREPARED BY

Julian Walcott

Centre for Resource Management and Environmental Studies

The University of the West Indies

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EXECUTIVE SUMMARY

The World Health Organisation declared the corona virus (COVID-19) a pandemic in March 2020. The number of virus related illnesses and deaths have since skyrocketed, creating a human crisis which is attacking societies at their core. In response, governments have employed measures such as border closures, lockdowns, quarantines, social distancing and teleworking in an effort to contain the spread of the disease. This has resulted in reduced economic activity globally, severe stifling of some of the most vital sectors (e.g. tourism) and increased levels of unemployment and poverty.

The size, remoteness and lack of resources make Small Island Developing States (SIDS) particularly vulnerable to external shocks such as pandemics and economic recessions. The key objective of this report is to document the impacts of the COVID-19 pandemic on Caribbean SIDS and their biodiversity, given the high dependence on biodiversity and natural resources for food, livelihoods and human well-being.

It is extremely important to note that the COVID-19 pandemic has not been ongoing in isolation but has added to, and in some cases worsened, the multitude of pre-existing issues/threats/challenges that SIDS have been facing before and during the current pandemic. It is also crucial to note that COVID-19 will impact different countries in different ways and in varying degrees based on their unique situations and climates (geographic, economic and social). It appears that COVID-19 is having an overall negative impact on SIDS, although some positive impacts have been reported. COVID-19 has led to significant health, economic and social impacts. The attainment of human well-being and sustainable development are two other major areas impacted by COVID-19.

Major economic impacts observed thus far include contraction of GDP, increased debt and increased trade deficits. COVID-19 has negatively affected livelihoods throughout Caribbean SIDS, given its far reaching impacts on most (if not all) sectors. The tourism and fisheries sectors have been severely impacted leading to increasing levels of unemployment, especially for the more vulnerable in society. The disruption to food supply chains has led to an increased level of food insecurity and poorer diet choices. The closure of schools is deepening the educational divide, especially for students without the necessary resources such as internet, tablets and parental

assistance. Regarding gender, the two major impacts being observed are increasing levels of gender inequality and gender-based violence. The cultural and creative industries have also been negatively impacted by COVID-19 with the livelihoods of many cultural professionals being seriously jeopardized. Despite the impacts of COVID-19 being felt by everyone, the more vulnerable in society (informal and non-essential workers, women and indigenous communities) are being impacted more, primarily due to lack of social protection systems.

Regarding the environment, both positive and negative COVID-19 impacts have been reported. The reduction in economic activity and travel is reported to have reduced carbon dioxide emissions and the significant reduction in human presence is believed to have reduced pressure on terrestrial and marine ecosystems. COVID-19 has also created negative environmental impacts such as increased plastic pollution (from the improper disposal of masks) and increased levels of unsustainable and illegal activities (such as overexploitation and wildlife poaching). Marine Protected Areas have also been negatively impacted due to significant decreases in funding (which comes from tourism) which is used to pay staff (such as rangers and patrol officers). As a result, data collection and monitoring efforts have decreased and the levels of illegal activities have increased due to no enforcement.

COVID-19 has also slowed progress towards the achievement of key multilateral environmental agreements due to: the postponement of major decision making events (such as Conferences of the Parties of various MEAs); the reduction of critical financing needed to conduct implementing tasks and actions; the reversal of hard-earned progress made towards achievement of national and regional obligations for MEAs; lack of research, data collection and monitoring which are all crucial to better decision making and policy formulation; reduced partnerships and cooperation and; loss of human capital.

To truly achieve our goal of building back better we will need to enhance capacities, mainstream the environment, source innovative forms of economic support, transition to new models (such as circular and blue economies), develop our digital economies, formulate and enact effective policies, involve data and science for evidence based decision making, establish new and innovative partnerships, improve our communications and adopt an all of society approach to ensure that no one is left behind.

Overall, the impacts of COVID-19 on SIDS have been predominantly negative. The medium- and long-term impacts are yet to be seen and will be influenced by the duration and severity of the pandemic. The impacts felt will vary from country to country based on individual vulnerabilities. However, the pandemic has afforded us the opportunity to stop and take stock of the gaps, the vulnerabilities, the inequalities and our shortcomings. It has allowed us to rethink, redesign and rebuild in a manner for us to achieve the goal of sustainable development and a society living in harmony with nature.

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ACRONYMS

AIMS	Atlantic, Indian Ocean, Mediterranean and South China Sea
BBNJ	Marine Biodiversity of Areas Beyond National Jurisdiction
BPOA	Barbados Programme of Action
CARICOM	Caribbean Community
CAR/RCU	Caribbean Regional Coordinating Unit
CBD	Convention on Biological Diversity
CCA	Cartagena Convention Area
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of the Parties
CRFM	Caribbean Regional Fisheries Mechanism
CTO	Caribbean Tourism Organisation
ECLAC	Economic Commission for Latin America and the Caribbean
FAO	Food and Agriculture Organisation
GBV	Gender Based Violence
GDP	Gross Domestic Product
GEF	Global Environment Facility
GII	Gender Inequality Index
GNI	Gross National Income
HDRO	Human Development Report Office
ICT	Information Communications Technology
IDB	Inter-American Development Bank
ILO	International Labour Organization
IMA	Institute of Marine Affairs
IMF	International Monetary Fund
IOC	Intergovernmental Oceanographic Commission
IPPC	International Plant Protection Convention
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	International Union for the Conservation of Nature
LAC	Latin America and the Caribbean
LBS	Pollution from Land-Based Sources and Activities
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreement
MSI	Mauritius Strategy of Implementation
MVI	Multidimensional Vulnerability Index
NCD	Non-Communicable Disease
NFP	National Focal Point
OECS	Organisation of Eastern Caribbean States
IUCN-ORMACC	Mexico, Central America and the Caribbean (IUCN Regional Office)
PoWPA	Programme of Work on Protected Areas
RAC	Regional Activity Centre
SAMOA	SIDS Accelerated Modalities of Action
SDG	Sustainable Development Goal
SIDS	Small Island Developing States

SPAW	Specially Protected Areas and Wildlife
SRC	Seismic Research Centre
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference of Trade and Development
UNDP	United Nations Development Programme
UNDESA	United Nations Department of Economic and Social Affairs
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Emergency Fund
UN-OHRLLS	UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNWTO	United Nations World Tourism Organisation
UWI	University of the West Indies
WCR	Wider Caribbean Region
WHC	World Heritage Convention
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

CHAPTER 1



The island of Redonda (Antigua and Barbuda) viewed from Montserrat

INTRODUCTION

1.1 Purpose of the report

The key objective of this report is to document the impacts of the COVID-19 pandemic on Small Island Developing States (SIDS) and their biodiversity, given the high dependence on biodiversity and natural resources for food, livelihoods and human well-being. Biodiversity and natural resources are significant contributors to the economy and livelihood (via sectors such as tourism and fisheries) as well as to the societies and cultures of SIDS. This report is intended to aid the Cartagena Convention Secretariat in the development of a strategy for SIDS to overcome the current shock and progress on a path to sustainable development.

Due to the Cartagena Conventions' focus on the protection and development of the marine environment the report has a strong marine emphasis. This report also focuses heavily on the impacts (negative and/or positive) on biodiversity which is inextricably linked to the economic, socio-cultural and environmental components of SIDS. A focus is thus given to implications for the achievement/implementation of priority actions set out within key multilateral environmental agreements, the tools and mechanisms employed to conserve biodiversity and achieve sustainable development. Implementation of priority actions are oftentimes achieved via projects, therefore the impacts on the implementation of key projects is also presented.

Apart from identifying impacts, the report embraces the concept of 'building back better' and presents mitigation actions to enhance resilience against such shocks as well as recommendations for moving forward to rebuild, achieve sustainable development and facilitate 'living in harmony with nature'.

Notably the COVID-19 pandemic is currently on-going and the report provides a taste of the initial impacts of COVID-19 on SIDS and their biodiversity. The medium and long term impacts may not be elucidated for some time yet, but the need for resilience, adaptation and a unified way forward, is highly evident.

1.2 Biological Diversity (Biodiversity)

Biological Diversity (biodiversity) has been defined as “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.” (MEA 2005). Biodiversity, through the various ecosystem services they provide¹, is inextricably linked to human well-being² (Figure 1).

Biodiversity provides nourishment and maintains food security for many people (e.g. via fish stocks), especially during times of external economic and ecological perturbations, shocks or surprises (such as global pandemics). Agricultural biodiversity is important for maintaining agricultural production and crucial for overcoming outbreaks of pests and pathogens and dealing with environmental stresses. Many livelihoods are linked to various goods (plants, animals and fungi) that provide an income for persons and their families. In addition, various industries (including pharmaceuticals, cosmetics, and horticulture) and sectors (e.g. tourism sector through ecotourism³) that rely heavily on biodiversity contribute significantly to the economies (GDP⁴) of countries and help to lower unemployment rates and reduce poverty levels. Ecosystem diversity increases resilience against natural disasters such as hurricanes and floods (e.g. through healthy mangroves, seagrass beds and coral reefs) which provide natural mitigation and disaster risk reduction. Biodiversity plays an integral role in social relationships, especially in the formation of religious and cultural values. Women play significant roles as land and resource managers, with women farmers currently accounting for 60-80% of all food production in developing countries. However, it is noted that gender often remains overlooked in decision-making on access to, and the use of, biodiversity resources. Regarding the impacts of biodiversity loss, disparities exist along gender lines in areas such as access to education and gender equality.

¹ Provisioning services (food, water); Regulating services (regulation of climate, water quality); Cultural services (recreation, spiritual fulfilment); and supporting services (nutrient cycling, soil formation).

² Human well-being consists of five main components: the basic material needs for a good life, health, good social relations, security and freedom of choice and action.

³ Nature-based tourism – bird and whale watching, hiking, scuba diving etc.

⁴ Gross Domestic Product: the total value of goods produced and services provided in a country during one year.

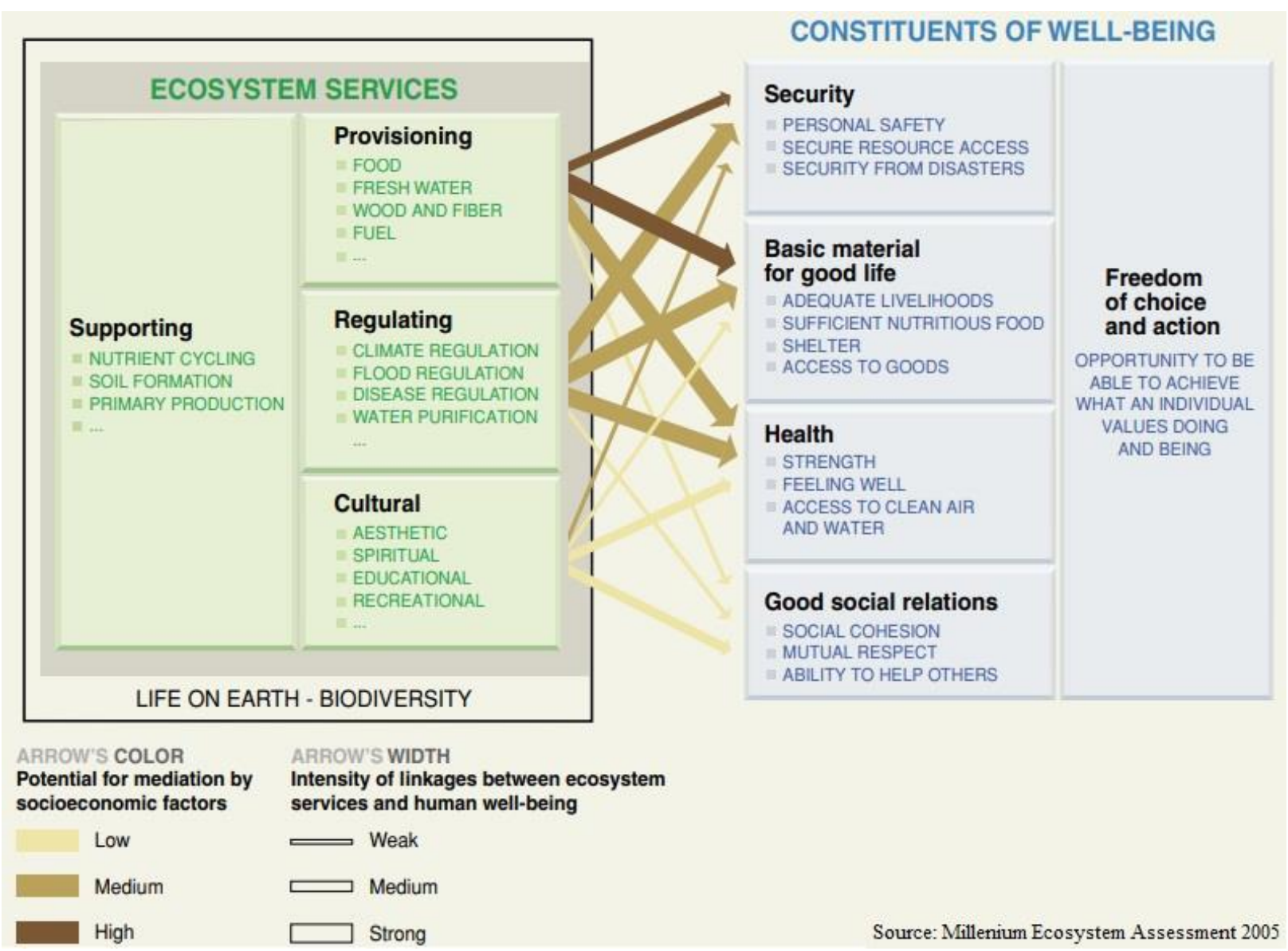


Figure 1 Linkages between the ecosystem service provided by biodiversity and human well-being

Habitat change (loss, degradation, and fragmentation), overexploitation or unsustainable use, invasive alien species (particularly in island ecosystems), climate change, and pollution have been identified as the five main direct drivers of biodiversity loss (Figure 2; MEA 2005). Of these, habitat change and pollution have an extremely high impact on biodiversity across multiple ecosystems and within the marine environment, overexploitation is indicated as having the highest impact on biodiversity (Figure 2). To combat key biodiversity threats, many conservation efforts (in the form of global and regional conferences, regional and national programmes, strategies and action plan, as well as common goals, targets etc.) have been embarked upon throughout the years. Figure 3 provides a timeline of some of the major biodiversity related events such as the creation of the United Nations Environment Programme (UNEP), the Cartagena Convention, the Convention on Biological Diversity (CBD), the Millennium Development Goals (MDGs), the Aichi Biodiversity Targets and the Sustainable Development Goals (SDGs).

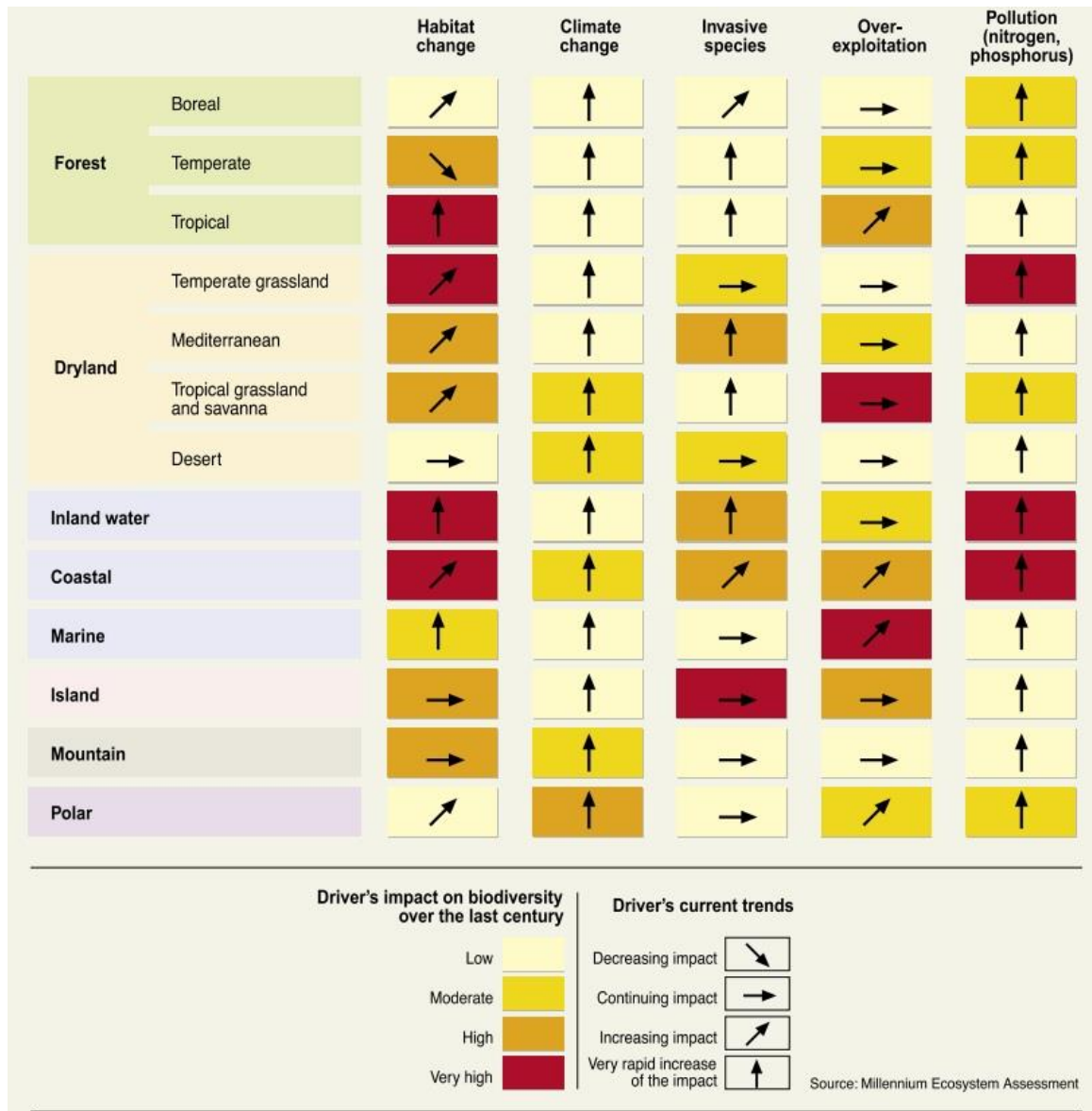


Figure 2 Five main direct drivers of biodiversity loss (MEA 2005)

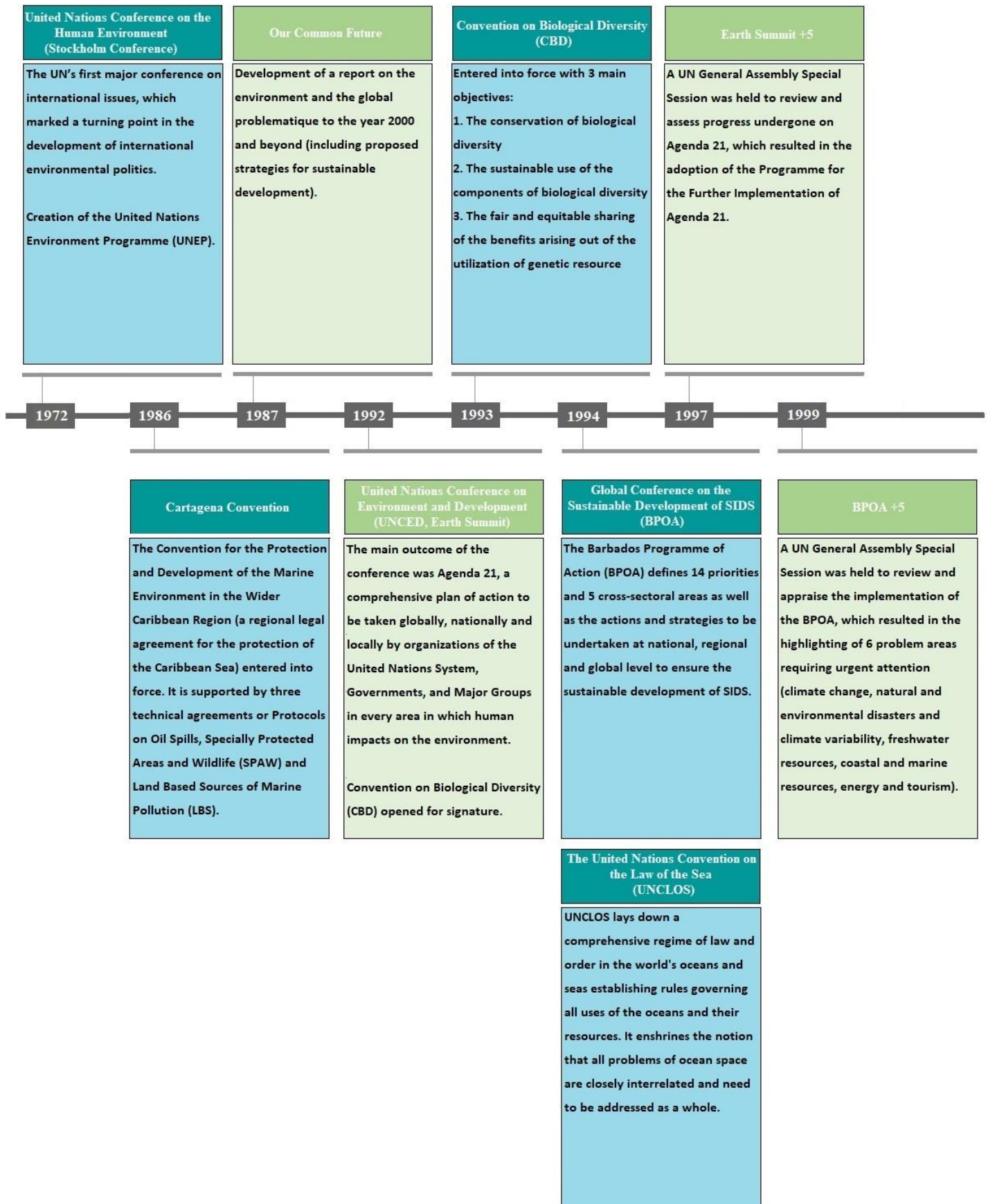


Figure 3 Timeline of key actions related to biodiversity and SIDS

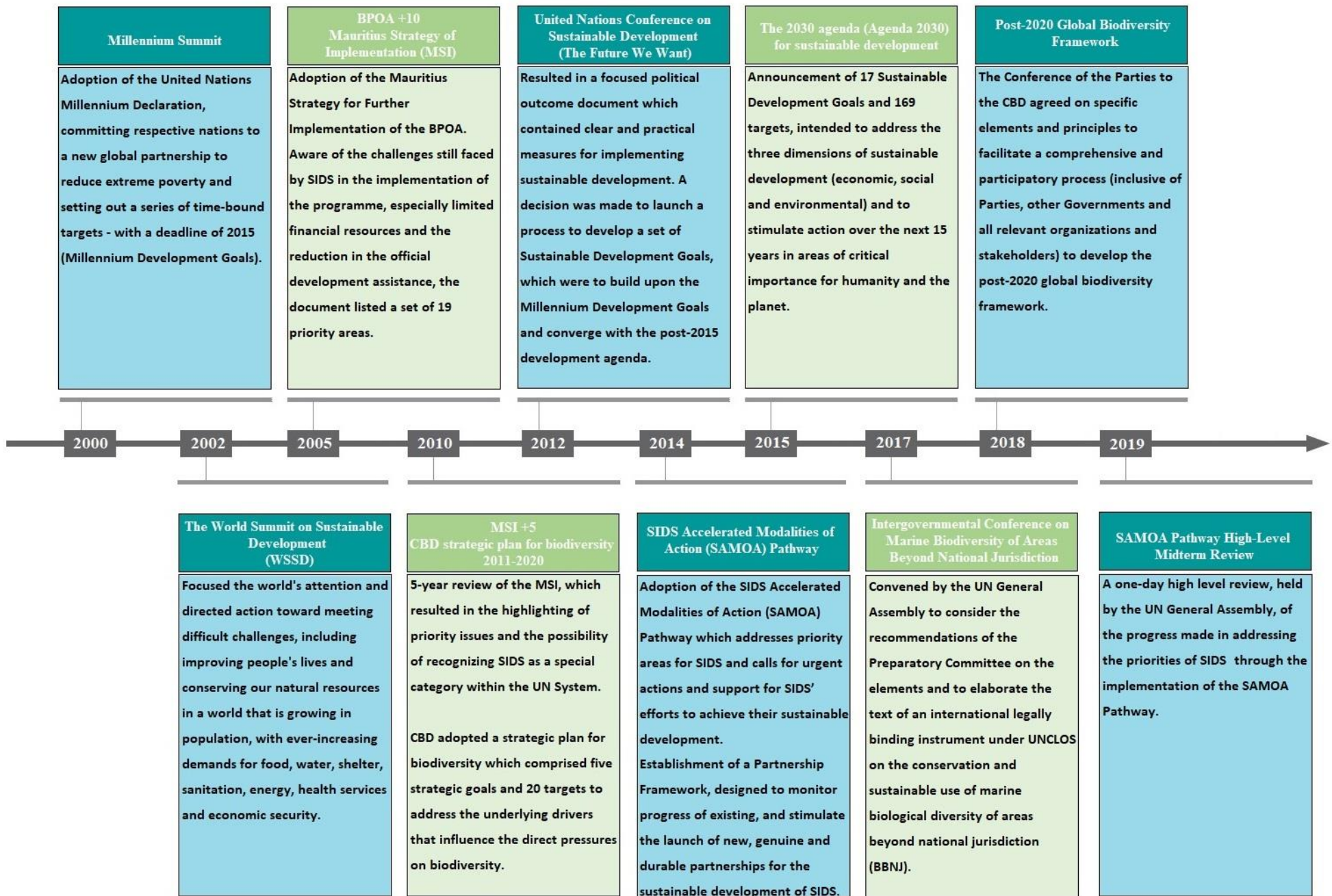


Figure 3 Timeline of key actions related to biodiversity and SIDS Cont'd

1.3 Small Island Developing States (SIDS)

Small Island Developing States (SIDS) have been described, by The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS 2011), as a distinct group of developing countries facing specific social, economic and environmental vulnerabilities. Fifty-eight countries and territories, spread over three geographical regions, including the Caribbean, the Pacific and the Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS), are presently classified as SIDS by UN-OHRLLS (Figure 4). Of the 58 SIDS, 38 are United Nations (UN) members and 20 are non-UN Members or Associate Members of the Regional Commissions.

SIDS face several challenges, attributed to their small size, small populations, limited resources and geographic dispersion: such as extreme vulnerability to the loss of biological and cultural diversity, climate change (in particular sea level rise), susceptibility to natural disasters, management of wastes and pollution, lack of renewable energy resources, high dependency on development assistance and international trade (especially commodities through preferential trade regimes), susceptibility to external shocks, high transportation costs and low connectivity. As a result, there is usually a high dependence on their coastal and ocean environments, highlighting their important value as a developmental resource.

Almost 30 years ago, at the 1992 United Nations Conference on Environment and Development (UNCED), SIDS were recognised as a special case both for environment and development. This led to the first ever Global Conference on the Sustainable Development of SIDS, in 1994, where the Barbados Programme of Action (BPOA) was set forth - a programme consisting of 14 priority and five cross-sectional areas aimed at ensuring the sustainable development of SIDS. Subsequent to these conferences, numerous conferences have been held to monitor progress and continually chart a way forward regarding the sustainable development of SIDS (see Figure 3). The following points have been highlighted as being important for planning and implementing sustainable development in SIDS:

- cooperation and assistance of the international and regional communities



63.2
Million

SIDS have a combined population of **63.2 million** people and a combined annual GDP of ~ **USD 600 billion**.

Tourism comprises up to **70%** of total GDP in SIDS.

27 SIDS are classified as Middle Income Countries (Lower and Upper); and **5** are Heavily Indebted Poor Countries (HIPC).

>60%

Caribbean and Pacific SIDS import **more than 60%** of their food, with half importing **over 80%**.

SIDS import **>USD 5 billion** of food annually.

The top 5 food imports are processed foods, wheat, corn, meat and dairy, valuing **>USD 1 billion** annually.

1/3

Caribbean SIDS average **33%** obesity rates, with at least **twice** as many obese women as men.

70% of adults in Pacific SIDS are overweight or obese and **77%** of deaths are attributable to NCDs.

Childhood stunting rates are **>20%** in the five poorest SIDS

17%

SIDS experience the largest annual losses due to damage from natural disasters relative to GDP at **17%**.

Women comprise **52%** of the agricultural workforce in SIDS.

In Pacific SIDS, the fishing industry contributes **up to 10%** of total GDP.

Figure 4 World map showing the 58 Small Island Developing States (source: Hickey and Unwin 2020)

- access to accurate, up-to-date-data and information (geographic, environmental, cultural and socio-economic)
- sustainable financing mechanisms
- capacity enhancement
- Gender mainstreaming⁵

Tourism is a major catalyst for the economic development of SIDS (Table 1). The tourism sector relies on the integrity of natural resources, as well as cultural distinctiveness, and is a key sector for income generation and employment. However, if not thoughtfully planned and managed, tourism could significantly degrade the environment on which it is so dependent. Eco-tourism, nature tourism and cultural tourism have thus been identified as ways to integrate tourism with existing cultural and environmental constraints and opportunities present in SIDS. Tourism also has strong links with other sectors such as agriculture (fisheries), environmental services and financial services. In some SIDS, fisheries contribute 10 per cent or more of GDP and may account for up to 90 per cent of animal protein in their populations' diet, with national fish consumption as much as four times higher than the global average per capita.

Several biodiversity conservation efforts have focussed specifically on SIDS, pertaining to their high levels and high dependence on biodiversity. Some of the major actions include (see Figure 3):

- the Barbados Programme of Action
- the Mauritius Strategy for the Further Implementation (MSI) of the Programme of Action for the Sustainable Development of SIDS
- the SIDS Accelerated Modalities of Action (SAMOA) Pathway
- the creation of the SIDS National Focal Point (NFP) network to facilitate the strengthening of coherence and coordination at the national, regional and global levels on SIDS related issues and foster peer-learning and exchange of best practices on the implementation and follow up of the SAMOA Pathway, the 2030 agenda for sustainable development, the Sustainable Development Goals (SDGs) and other global frameworks

⁵ A globally accepted strategy for promoting gender equality between women and men.

Table 1 Indicators of tourism dependence for Cartagena Convention SIDS (adapted from IDB 2020b)

	Tourism Dependency Index (TDI) (2018)	Tourism Dependency Index (TDI): Rank out of 166 Countries Globally (2018)	Tourism Export Receipts (percent of total exports) Ave. (2014-18)	Total Contribution to GDP (percent of total GDP) Ave. (2014-18)	Total Contribution to Employment (percent of total employment) Ave. (2014-18)	Passenger Tourism Arrivals (per year) Ave. (2014-18)
Aruba	84.7	1	77.2	87.9	89.3	1,110,300
Antigua and Barbuda	61.4	4	81.0	54.5	48.8	256,000
Bahamas, The	59.4	5	75.2	47.5	55.6	1,504,600
St. Lucia	56.4	6	80.9	40.1	48.4	362,400
Dominica	48.3	9	75.8	36.3	32.9	73,900
Grenada	42.4	11	83.0	22.9	21.4	162,800
Barbados	39.4	14	40.5	39.0	38.9	617,800
St. Vin. & Grenadines	39.3	15	73.6	23.2	21.4	76,200
St. Kitts and Nevis	38.8	16	63.0	27.1	26.6	117,400
Jamaica	38.4	17	55.1	31.6	28.7	2,242,200
Belize	38.4	18	39.6	40.1	35.6	392,800
Dominican Republic	22.9	33	36.3	16.9	15.6	5,891,540
Haiti	17.0	44	33.2	9.6	8.4	468,040
Trinidad and Tobago	8.1	100	6.2	7.8	10.3	406,200
Guyana	6.5	120	4.9	7.1	7.5	236,400
Suriname	3.2	160	4.1	3.0	2.8	253,500

Notes: The Tourism Dependency Index (TDI) is calculated using 5-year averages (2014-2018) for the total contribution of tourism to total export receipts, GDP, and employment for each country. The range is from zero to 100, with 100 representing total dependence. TDI for 35 countries in Latin America and the Caribbean for which data was available displayed. Color scale represents the relative contribution of the variable when compared to other countries (red = highest / blue = lowest).

Source: Authors' calculations based on data from World Bank Development Indicators and World Travel and Tourism Council databases.

1.4 The Cartagena Convention Area

The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (WCR) or Cartagena Convention, which was adopted in Cartagena, Colombia on 24 March 1983 and entered into force on 11 October 1986, is the only regional legal agreement for the protection of the Caribbean Sea. The Secretariat to the Cartagena Convention and its Protocols (the Regional Coordinating Unit: the UN Environment Programme-Caribbean Regional Coordinating Unit: UNEP-CAR/RCU) was established in 1986 in Kingston, Jamaica. The Convention has been ratified by 26 UN Member States in the WCR (Figure 5B). The Convention is supported by three Protocols (technical agreements) on Oil Spills⁶, Specially Protected Areas and Wildlife⁷ (SPAW) and Land Based Sources of Marine Pollution⁸ (LBS). Ratification maps for each protocol are also provided in Figure 5. The Convention and its associated protocols work in support of other global environmental conventions, agreements and commitments. Each Protocol of the Cartagena Convention is served by one or more Regional Activity Centres (RACs; Table 2) which provide technical support and expertise to assist Contracting Parties in meeting their obligations to the Convention and its Protocols.

Table 2 Regional activity centres for each of the three Cartagena Convention Protocols

Protocol	Centre	Country
Oil Spills Protocol	The Regional Marine Pollution Emergency Information and Training Center for the Wider Caribbean	Curacao
Pollution/LBS Protocol	The Centre of Engineering and Environmental Management of Coasts and Bays ⁹ (REMPEITC-Caribe)	Cuba
	The Institute of Marine Affairs ¹⁰ (IMA)	Trinidad and Tobago
SPAW Protocol	The Regional Activity Centre for Specially Protected Areas and Wildlife ¹¹ (SPAW-RAC)	Guadeloupe

⁶ <https://www.unep.org/cep/oil-spills-protocol>

⁷ <https://www.unep.org/cep/what-we-do/specially-protected-areas-and-wildlife-spaw>

⁸ <https://www.unep.org/cep/what-our-pollution-or-lbs-protocol>

⁹ <http://www.racrempeitc.org/>

¹⁰ <https://www.ima.gov.tt/>

¹¹ <https://www.car-spaw-rac.org/>

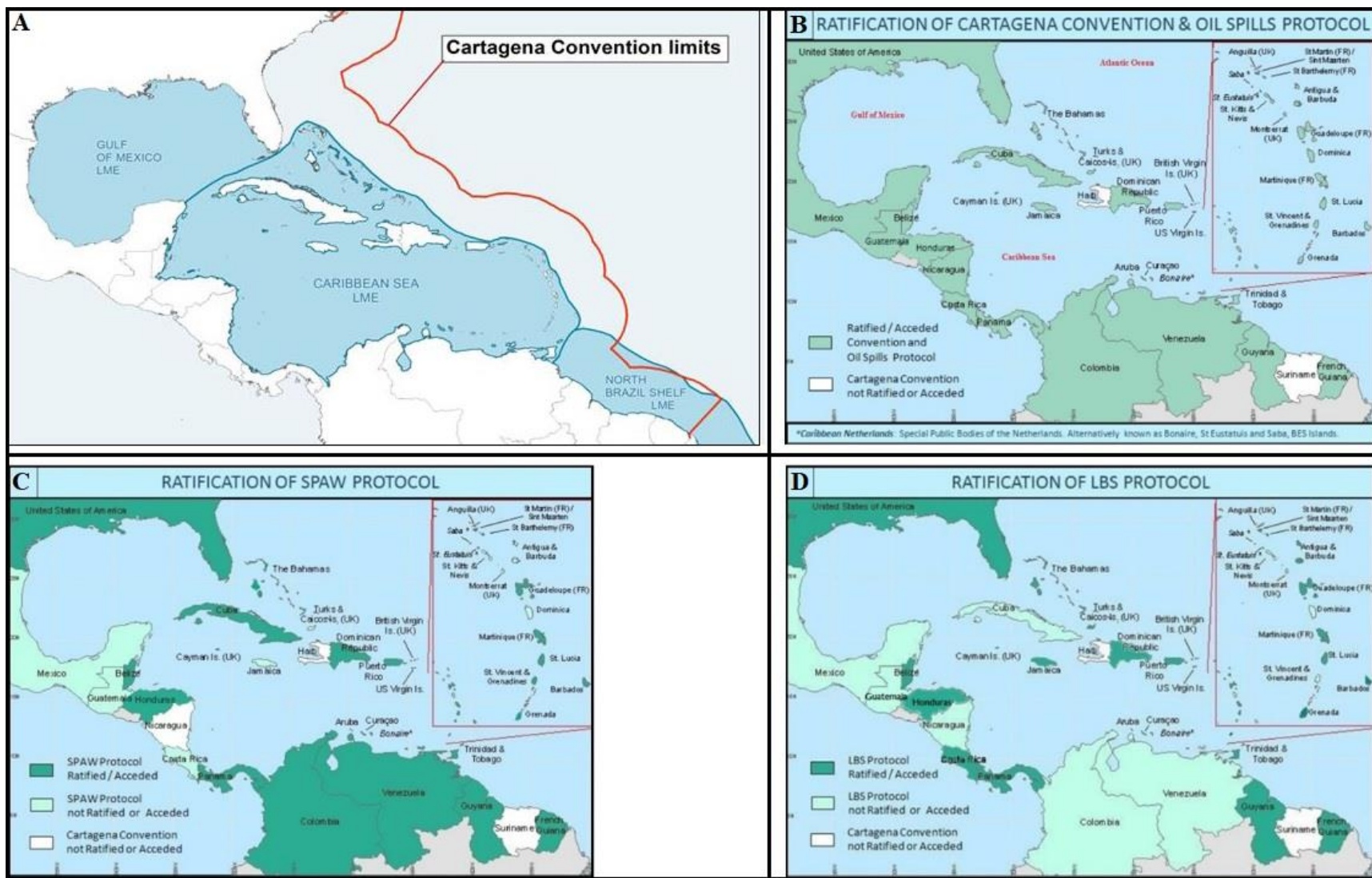


Figure 5 Cartagena Convention Area and ratification maps (Source: <https://www.unep.org/cep/>)

The Cartagena Convention Area (CCA) includes the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30° north latitude and within 200 nautical miles of the Atlantic Coasts of the United States of America (Figure 5A). 50% (29) of existing SIDS are found within the CCA. The 29 SIDS (Table 2), which consist of UN Members (16) and non-UN members/Associate Members of the Regional Commissions (13), exhibit great ecological, cultural, political and economic diversity (see Appendix 1 for country profiles of UN SIDS). The majority (59%) are less than 1,000 km² and have populations >150,000 (52%; Table 2). Throughout the 29 SIDS, four official languages exist (English, French, Spanish and Dutch) with the majority of SIDS (66%) recognising English as their official language (Table 3).

Regarding ratification of key multilateral environmental agreements (MEAs) and their associated protocols, the majority (76%) of SIDS within the CCA have signed on to 75% or more of the identified MEAs (Table 2). Only one SIDS (Haiti) has signed on to less than half of the identified MEAs. It must be noted that Haiti and Suriname, although within the CCA are not parties to the Cartagena Convention.

Regarding the MEAs and associated protocols, four have been ratified by all 29 SIDS within the CCA:

- International Plant Protection Convention (IPPC)
- United Nations Convention to Combat Desertification (UNCCD)
- United Nations Framework Convention on Climate Change (UNFCCC)
- World Heritage Convention (WHC)

Several of the MEAs and associated protocols have also not been ratified by a significant proportion of the SIDS within the CCA:

- Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- Protocol on Pollution from Land-Based Sources and Activities (LBS protocol)
- Protocol on Access and Benefits Sharing (Nagoya protocol)
- Protocol on Specially Protected Areas and Wildlife (SPA protocol)

Table 3 General information related to SIDS found within the CCA

SIDS	ISO	Language	Size (km ²)	Population	Ratified MEAs															% ¹
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
UN Members																				
Antigua and Barbuda	ATG	English	442	98,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	93
The Bahamas	BHS	English	13,940	393,000	✓	✓	✓	✓	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓	80
Barbados	BRB	English	431	287,000	✓	✓	✓	✓	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓	80
Belize	BLZ	English	22,966	398,000	✓	✓	✓	✓	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓	80
Cuba	CUB	Spanish	109,884	11,327,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	93
Dominica	DMA	English	750	75,000	✓	✓	✓	✓	x	✓	x	x	x	x	x	✓	✓	✓	✓	60
Dominican Republic	DOM	Spanish	48,671	10,848,000	✓	✓	✓	✓	✓	✓	S	✓	✓	✓	✓	✓	✓	✓	✓	93
Grenada	GRD	English	345	112,000	✓	✓	✓	✓	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓	80
Guyana	GUY	English	214,969	787,000	✓	✓	✓	✓	x	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	87
Haiti*	HTI	French	27,750	11,402,000	x	x	✓	x	x	✓	S	x	x	x	x	✓	✓	✓	✓	40
Jamaica	JAM	English	10,990	2,961,000	✓	✓	✓	✓	x	✓	✓	✓	x	✓	x	✓	✓	✓	✓	80
Saint Kitts and Nevis	KNA	English	261	57,000	✓	✓	✓	✓	x	✓	x	x	✓	x	x	✓	✓	✓	✓	67
Saint Lucia	LCA	English	539	184,000	✓	✓	✓	✓	x	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	87
Saint Vincent and the Grenadines	VCT	English	389	111,000	✓	✓	✓	✓	x	✓	x	x	x	x	✓	✓	✓	✓	✓	67
Suriname	SUR	Dutch	163,820	587,000	x	✓	✓	✓	x	✓	x	x	x	✓	x	✓	✓	✓	✓	60
Trinidad and Tobago	TTO	English	5,127	1,400,000	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	93
Non-UN Members/Associate Members of the Regional Commissions																				
Anguilla (United Kingdom)	AIA	English	91	15,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
Aruba (Netherlands)	ABW	Dutch	180	107,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	93
Bermuda (United Kingdom)	BMU	English	53	61,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
British Virgin Islands (United Kingdom)	VGB	English	151	33,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
Cayman Islands (United Kingdom)	CYM	English	264	64,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
Curacao (Netherlands)	CUW	Dutch	444	164,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	93
Guadeloupe (France)	GLP	French	1,705	400,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100
Martinique (France)	MTQ	French	1,128	375,000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100
Montserrat (United Kingdom)	MSR	English	103	5,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
Puerto Rico (U.S.A)	PRI	Spanish	8,868	2,861,000	✓	x	x	✓	x	✓	✓	✓	x	✓	✓	✓	x	✓	✓	67
Sint Maarten (Netherlands)	SXM	Dutch	34	41,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	93
Turks and Caicos Islands (United Kingdom)	TCA	English	948	37,000	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	x	✓	✓	✓	✓	87
U.S. Virgin Islands (U.S.A)	VIR	English	347	104,000	✓	x	x	✓	x	✓	✓	✓	x	✓	✓	✓	x	✓	✓	67
% ratification of MEA					93	90	93	97	52	100	66	48	55	83	59	100	93	100	100	

*Haiti is also a least developed country¹²

1 – Cartagena Convention and oil spills protocol; 2 – Cartagena protocol; 3 - CBD; 4 – CITES; 5 – CMS; 6 – IPPC; 7 – ITPGRFA; 8 – LBS protocol; 9 – Nagoya protocol; 10 – Ramsar Convention; 11 – SPAW protocol; 12 – UNCCD; 13 – UNCLOS; 14 – UNFCCC; 15 – WHC; S – only signatory

¹² Deemed highly disadvantaged in their development process, for structural, historical and also geographical reasons.

1.5 The COVID-19 pandemic

The Corona virus disease (COVID-19) is an infectious disease, caused by a newly discovered coronavirus (discovered in December 2019 in Wuhan, China), which spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. It affects the respiratory system leading to mild to moderate respiratory illness, serious illness and even death. The more serious illnesses and deaths have been more frequent in older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease and cancer (non-communicable diseases).

The World Health Organization (WHO) on 30 January 2020 declared COVID-19 a Public Health Emergency of International Concern and on 11 March 2020 it was declared a Pandemic. The speed and scale of the spread, the severity of cases, and the social and economic impact has been dramatic. The UN General Secretary noted that the global pandemic is more than a health crisis, stating that it is a human crisis which is attacking societies at their core. Governments have and continue to take the necessary measures to contain the spread of the disease through border closures, lockdown measures, social distancing, teleworking, quarantine and community mitigation strategies. This has led to reduced international, regional and national economic activity. Some of the most vital sectors, including tourism, the trade of primary commodities and fisheries, have been severely stifled, leading to increased levels of unemployment and rising poverty levels.

At the start of June 2021, the World Health Organization (WHO) reported a total of 170,747,372 COVID-19 cases and 3,555,726 deaths globally (source: WHO Coronavirus [COVID-19] Dashboard¹³). Throughout the 29 SIDS within the CCA, a total of 796,530 COVID-19 cases and 10,981 deaths have been reported (see Figure 6).

¹³ <https://covid19.who.int/>

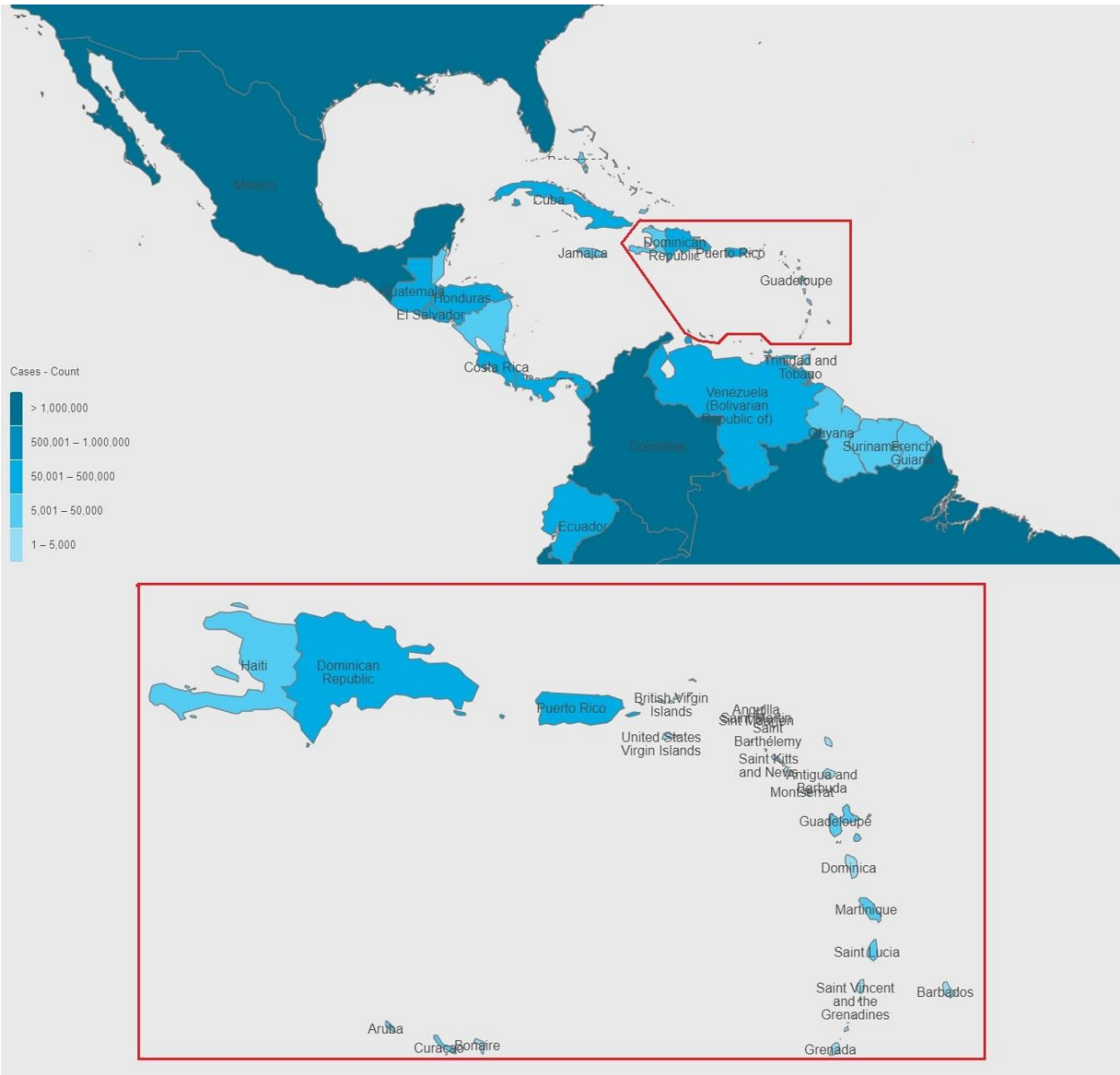


Figure 6 Visualisation of COVID-19 cases (count) for the SIDS within the CCA

CHAPTER 2



Saint Kitts and Nevis (background)

METHODOLOGY

2.1 Approach

A two-pronged approach was utilised to gather the data and information pertaining to the impact of the ongoing COVID-19 pandemic on SIDS and their biodiversity within the Cartagena Convention Area. A desktop study was conducted in May 2021 which involved a thorough review of published literature (reports, policy briefs, information products) as well as other pertinent resources such as databases, websites and various forms of media (see Appendix 2 for a compendium of useful resources). In addition, a survey instrument (see Appendix 3) was utilised to collect insights from key informants throughout the CCA. The survey instrument was disseminated to key informants via email as a Google Form. Key informants included:

- Caribbean Tourism Organisation (CTO) NFPs
- Cartagena Convention RACs primary contacts
- Cartagena Convention national focal points (NFPs)
- CBD NFPs
- CBD's Programme of Work on Protected Areas (PoWPA) NFPs
- Global Environment Facility (GEF) NFPs
- Intergovernmental Oceanographic Commission (IOC) NFPs
- Project focal points
- Regional organisations (e.g. CARICOM, CRFM, ECLAC, IUCN-ORMACC, OECS)
- SIDS NFPs
- SPAW NFPs
- UN Development Program (UNDP) NFPs
- UN Food and Agriculture Organisation (FAO) NFPs
- USAID Mission NFPs

Key informants were targeted from a representative subset of the 29 SIDS within the CCA, which included larger and smaller states, English-, Dutch-, French- and Spanish-speaking states as well as states from the major sub-regional groupings (e.g. CARICOM and the OECS). The individual states included Antigua and Barbuda, Belize, Cuba, Curaçao, Dominica, Guadeloupe, Guyana, St. Lucia and Trinidad and Tobago.

As previously indicated, implementation of priority actions is oftentimes achieved via projects, therefore insights on the impact of COVID-19 on the implementation of key projects supported by the Cartagena Convention in SIDS within the CCA were also sought. The projects included:

- Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (IWEco)¹⁴
- CREW+: An integrated approach to water and wastewater management using innovative solutions and promoting financing mechanisms in the Wider Caribbean Region¹⁵

2.2 Specific areas of focus

Key areas of focus included:

- *Economies and livelihoods* - tourism (including coastal and marine where possible), agriculture (particularly fisheries and aquaculture), unemployment, poverty and financing for sustainable development
- *Sustainable Development Goals (SDGs)* - specific attention was paid to SDG 14 (life below water) and in particular to Targets 14.1, 14.5, 14.7, 14.a and 14.c (and the related Aichi Biodiversity Targets; see Chapter 4 for information on targets)
- *Aichi Biodiversity Targets* - Specifically Targets 3, 6, 8, 10, 11, 17, 18 and 19 (see Chapter 4 for information on targets)
- *Post-2020 global biodiversity framework* – specifically focused on the engagement of relevant SIDS in the indicated opportunities for which input into the process could be provided (see Chapter 4).
- *Negotiations on BBNJ* (marine biodiversity of areas beyond national jurisdiction) – specifically focussed on the intersessional work programme (see Chapter 4), outlined by the President of the BBNJ Intergovernmental Conference to be carried out until negotiations could be resumed at the fourth session of the Conference (at the earliest possible available date in 2021)
- *Mitigation actions and priority actions for building back better*

¹⁴<http://www.iweco.org/#:~:text=The%20Integrating%20Water%2C%20Land%20and,as%20well%20as%20climate%20change.>

¹⁵ <https://www.thegef.org/project/crew-integrated-approach-water-and-wastewater-management-using-innovative-solutions-and>

2.3 Challenges

The fact that the COVID-19 pandemic is ongoing, makes it difficult to ascertain the full impact on SIDS and their biodiversity. Key informants indicated that it was too early to provide a true sense of the impacts, especially due to continued measures implemented by countries to arrest the spread of the virus, including lockdowns, remote working, cessation of activities and the lack of any type of assessments. Some of the impacts will only be manifested in the medium or long term due to various decisions and actions being currently taken in response to the pandemic. As a result, the majority of information speaks to possible impacts based on current occurrences and in some cases with the use of forecast modelling.

Another key challenge was the lack of up-to-date data and/or disaggregated data, especially for SIDS within the CCA. Data are either not available or often presented in large groupings such as global, Americas, Latin America and the Caribbean (LAC), middle and low income countries and simply as SIDS (inclusive of all regions). Furthermore, groupings such as LAC often only include Cuba and the Dominican Republic as representatives of the Caribbean Region. Data are also not often disaggregated by gender to allow for the development of biases, gaps etc.

The development of the report was time constrained and thus the reduction in the speed at which business activities are conducted (response times, coordination etc.), due to COVID-19 and associated measures, hindered the acquisition of crucial insights from key informants in a timely manner.

A note of caution is the sole attribution of currently manifested impacts to COVID-19. Many threats and pressures existed before COVID-19, some of which have been exacerbated and others now being brought to light. The cumulative impact of the various threats and pressures should also be considered.

2.4 Lessons learned

Based on the development of this report, it is evident that these represent the initial impacts caused, or contributed to, by COVID-19 and thus a mid- and long-term review would be ideal to truly monitor the impacts of the pandemic on SIDS and their biodiversity and to track the effectiveness of decisions being made and mitigation actions being undertaken. As time progresses, quantitative

data as well as published literature outlining impacts, effectiveness of mitigation actions, lessons learned and a better way of ‘building back better’ should also be more prevalent.

It is also evident that the length of time for the development of such reports should cater to the reduced pace of business and allow for the harnessing of critical insights from key informants.

CHAPTER 3



Barbados

Assessing the Impact of COVID-19 on SIDS
within the Cartagena Convention Area

It is extremely important to note that the COVID-19 pandemic has not been ongoing in isolation but has added to, and in some cases worsened, the multitude of pre-existing issues/threats/challenges that SIDS have been facing before and during the current pandemic (see Box 3.1). For example, environmental hazards, such as hurricanes and tropical storms, are reported to have caused more than US\$118 billion in damages and losses over the past 3 years (CDEMA, 2020). Such hazards will not cease, but continue amidst the ongoing pandemic. As a result of the cumulative impacts, the pandemic has been described as evolving into a multidimensional development crisis that exacerbates these pre-existing issues/threats/challenges (Assa and Meddeb 2021).

It is also important to note that COVID-19 will impact different countries in different ways and in varying degrees based on their unique situations and climates (geographic, economic and social). Key to recognising the impacts on SIDS is an understanding of their vulnerabilities, inclusive of multiple dimensions and simply not based on income levels (GNI per capita). Assa and Meddeb (2021) highlights the vulnerability dashboard produced by UNDP'S Human Development Report Office (HDRO) which includes statistics on multidimensional poverty, social protection, and immediate economic vulnerability (based on the inflow of remittances, as a percentage of GDP, net Official Development Assistance received, as a percentage of Gross National Income (GNI), and inbound tourism expenditure (as a percentage of GDP). Another key area highlighted by Assa and Meddeb (2021) in the consideration of vulnerability of SIDS is that of biodiversity (share of agriculture as well as fishing, forestry, and hunting in GDP). The multidimensional vulnerability index (MVI) developed by Assa and Meddeb (2021) is composed of four principal components which include economic, financial, environmental and geographic vulnerabilities (Figure 7). The four components of the MVI can be useful as an analytical tool as they can help to decompose a country's overall vulnerability and each component can be further tracked down to its original indicator values (see Appendix 4).

Box 3.1. Examples of on-going challenges faced by SIDS amidst the COVID-19

Volcanic eruption (St. Vincent and the Grenadines)

- April 2021, major volcanic explosions (La Soufriere volcano)
- 16,000 persons had to evacuate their homes
- 4,000 people from the north of the island displaced, having to be housed in shelters (many lacking basic services such as drinking water)
- the island was blanketed under ash and became under threat from pyroclastic (hot gas and debris) flows and the degradation of local food and water supplies
- entire villages were covered in ash, buildings damaged, schools and businesses closed and crops and livestock destroyed
- Emergency response efforts from neighbouring islands had to be employed
- Ashfall also affected neighbouring islands as well, such as St. Lucia and Barbados (leading to decreased air quality an additional partial shutdowns)



Damage to trees and crops because of ashfall (Photo credit: Prof Robertson, UWI-SRC)

Dengue fever outbreaks

- August 2020, St. Lucia declared an outbreak (503 confirmed cases).
- At the end of September 2020, Martinique and Guadeloupe reported to be in an epidemic phase regarding dengue fever.
- As of January 2021, there were 1,790 confirmed cases with 8 deaths in St. Vincent and the Grenadines.

Box 3.1 Examples of on-going challenges faced by SIDS amidst the COVID-19 pandemic

Flooding

- May - June 2021, Guyana reports torrential rains and flooding as the worst natural disaster in its history. Thousands of homes were flooded, families evacuated and tens of thousands of farms destroyed (crops and livestock damaged). Civil Defence Commission established shelters to accommodate affected residents and distributed over 1,000 food parcels to affected areas.



Source: CARICOM News Time

Sargassum influxes

- Many Caribbean SIDS continue to face periodic episodes of sargassum influxes along their coasts and nearshore waters, which can impact national economies (livelihoods, tourism, fisheries etc.)



Photo credit: Julian Walcott

Box 3.1 Examples of on-going challenges faced by SIDS amidst the COVID-19 pandemic

Tropical Storm/Hurricane

- July 2021, Tropical Storm/Hurricane Elsa impacts several Caribbean SIDS
- leading to 3 reported deaths
- extensive damages to houses and buildings
- loss of electrical power and water supply for days



Damage caused to a house in Barbados (REUTERS/Nigel Browne)

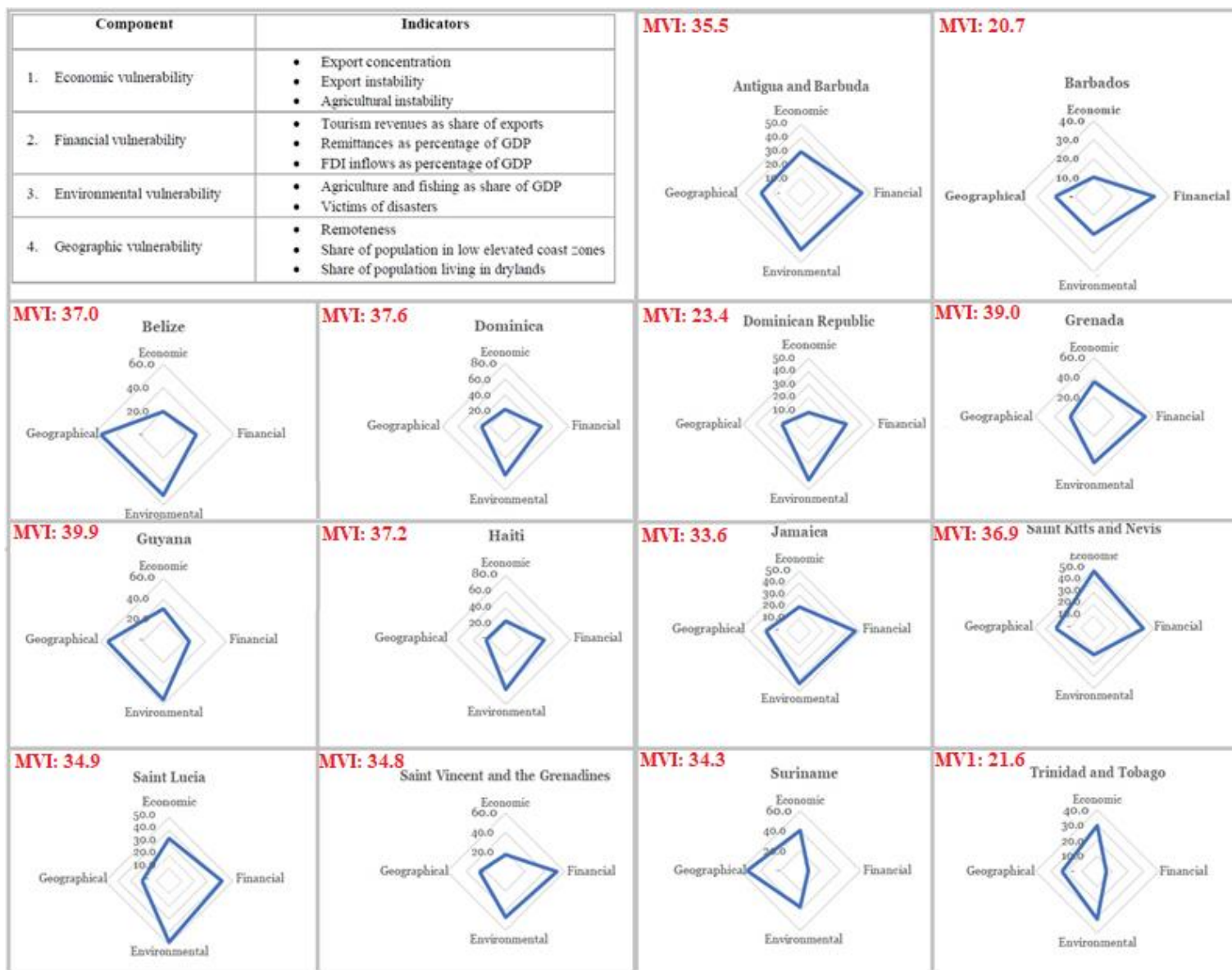


Figure 7 MVI vulnerability decomposition for 14 SIDS within the CCA (source Assa and Meddeb 2021)

Figure 7 highlights the fact that although SIDS share common characteristics their overall vulnerabilities and the specific components of their vulnerabilities can differ. MVIs for SIDS presented in Figure 7 ranged from 39.9 (Guyana) to 20.7 (Barbados). As an example, Guyana is very vulnerable in the geographical and environmental dimensions, moderately vulnerable in the economic dimensions and not very vulnerable financially, whereas Suriname is very vulnerable in the geographic dimension, moderately vulnerable in the economic and environmental dimensions and not very vulnerable financially. Based on overall index scores, Guyana and Grenada may be impacted more by the COVID-19 pandemic than Barbados and Trinidad and Tobago.

The full extent of the impacts will be influenced by the duration and severity of the pandemic, whether the recovery is gradual or rapid and whether we return to the pre-pandemic world or to one that is more sustainable and equitable. Some impacts remain difficult to quantify, such as pollution and threats to the conservation of wildlife and biodiversity, due to various reasons such as the lack of any data collection or monitoring due to the various mitigation measures in place.

3.1 Overall

It appears that COVID-19 is having an overall negative impact on SIDS, although some positive impacts have been reported. COVID-19 has led to significant health, economic and social impacts which are highlighted by the number of persons infected and killed, the expenditure on personal protective equipment (masks, shields etc.) as well as medical equipment and supplies (such as ventilators and vaccines), the decrease in economic activities at all levels and the social disruptions caused by quarantines, lockdowns and social distancing mitigation measures put in place. Production markets have crashed, business have closed, unemployment levels have increased and education, food and health systems have all been compromised in the wake of this global pandemic.

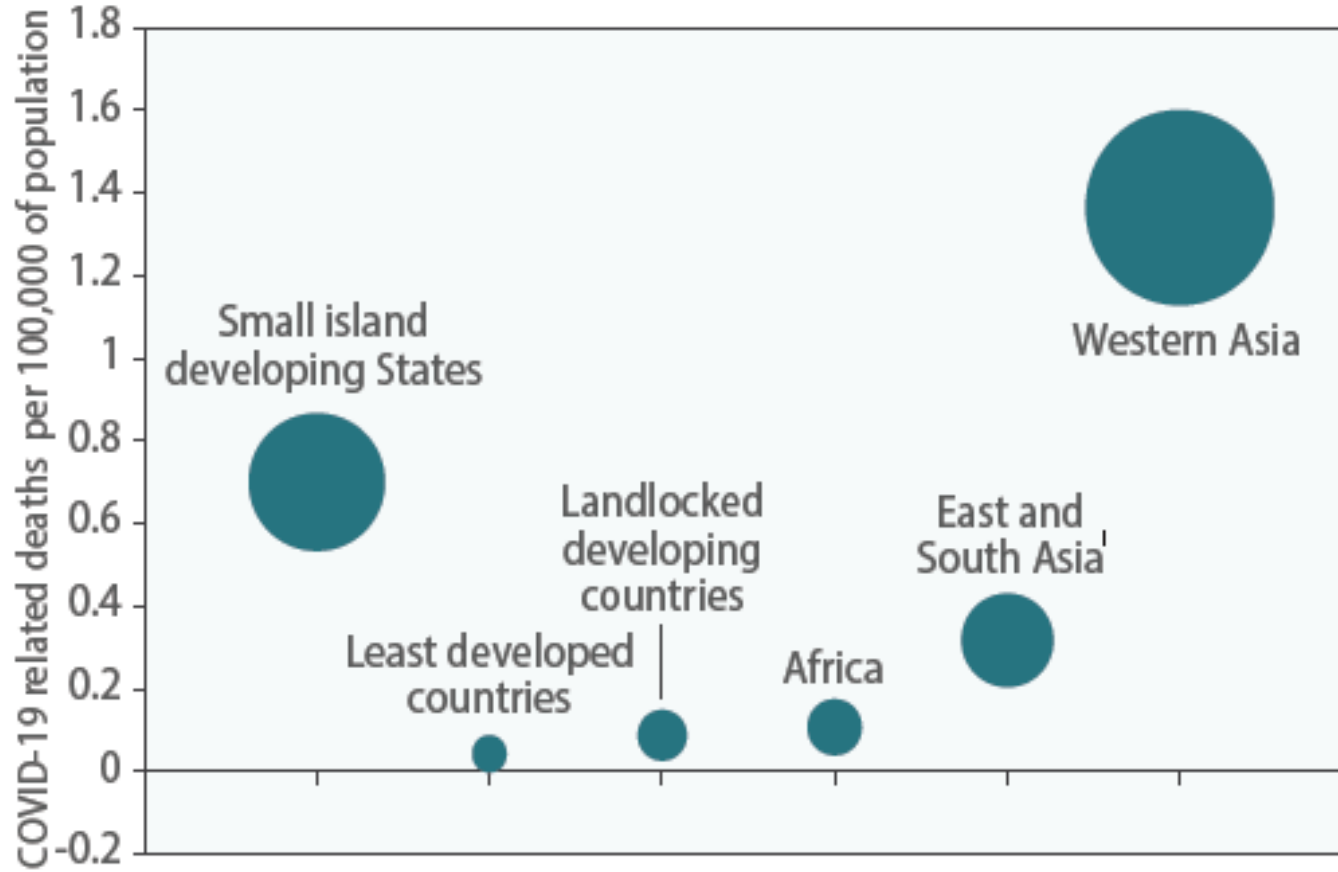
Loss of lives has been one of the most immediate and noticeable impacts of COVID-19. According to the WHO, over 10,000 persons from SIDS within the CCA have succumbed to the Corona virus disease (COVID-19). Emerging evidence from the pandemic suggests that people living with non-communicable diseases (NCDs: hypertension, cardiovascular diseases, cancer, diabetes and respiratory diseases such as asthma) are at higher risk of becoming severely ill, having severe

complications and/or dying from the virus (NCD Alliance 2020). The high prevalence of NCDs in SIDS, owing in part to diets lower in essential micronutrients, which are energy-dense and high in salt, sugar and fat, has rendered populations particularly susceptible to COVID-19 (Figure 8).

The attainment of human well-being and sustainable development are two other major areas impacted by COVID-19. As previously identified, human well-being consists of five main components: the basic material needs for a good life, health, good social relations, security and freedom of choice and action. Covid-19 has impacted each of these components, leading to declining human well-being. The global pandemic has reduced access to basic material needs (e.g. food), contributed to declining health (and fatalities), disrupted social relations (affecting traditions and cultures), the feeling of a lack of security as the virus spreads and loss of freedom of choice and actions due to various mitigation measures put in place by governments. Sustainable development has been described as a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are made consistent with future as well as present needs (Brundtland 1987). Such development that meets the needs of the present without compromising the ability of future generations to meet their own needs has been impacted by COVID-19, owing in part to the many uncertainties and unknowns regarding the medium- to long-term impacts and how they may manifest.

3.2 Economy

One of the most crippling impacts of COVID-19 is the economic depression due to required isolations, lockdowns, and widespread closures to slow the spread of the virus. It has impacted the fiscal base through economic sectors like tourism and the movement of goods (trade). It has disrupted economies across the world and resulted in massive losses of employment and incomes (World Bank, 2020a). The global economy was projected to contract by 3 percent in 2020 (IMF 2020) and the International Labour Organisation (ILO) estimated that as of April 2020 1.6 billion informal economy workers were significantly impacted by the COVID-19 pandemic, leading to a 60 per cent decline in their earnings (ILO 2020). The full and long-term impacts on economies



Source: UN DESA calculations, based on data from Johns Hopkins University.

Note: The size of the bubble represents reported COVID-19 related deaths per 100,000 people.

Figure 8 COVID-19 related deaths in selected country groups and regions, as of 28 April 2020 (source UNDESA 2020b)

remain uncertain and will be influenced by factors such as the length of the pandemic, supply disruptions, shifts in spending patterns and behavioural changes.

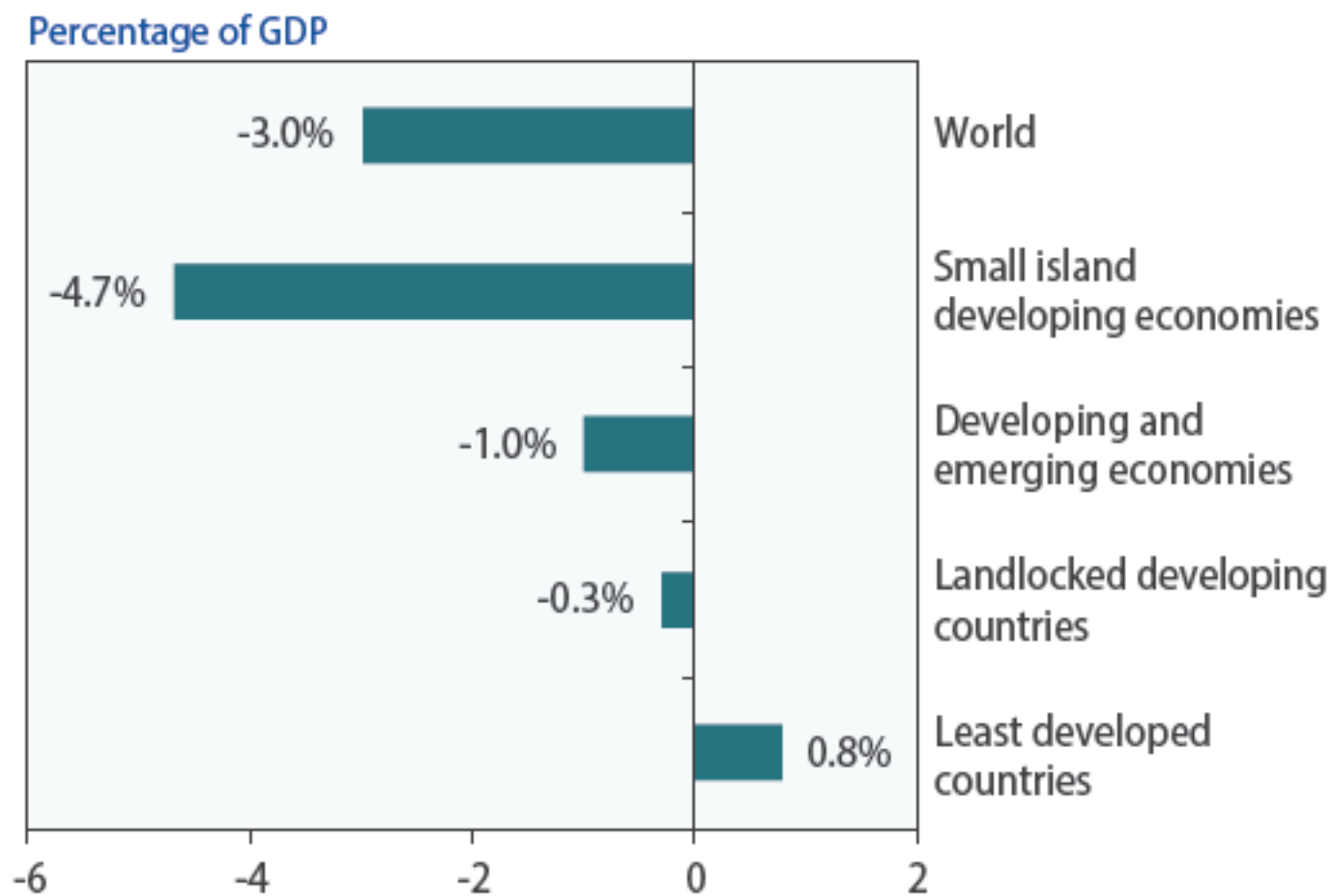
As a result, the major economic impacts include:

- Contraction of GDP

With reduced economic activities, the GDP of SIDS has contracted but the true extent of contraction is not yet known. The Economic Commission for Latin America and the Caribbean (ECLAC) estimated a 1.5% contraction of GDP (ECLAC 2020), while calculations conducted by UNDESA (2020b), suggested a 4.7% contraction for SIDS globally (Figure 9). The United Nations Conference on Trade and Development (UNCTAD) estimated falls in GDP for Caribbean SIDS ranging from 2-16% and the required financial assistance needed ranging from 28-846 million USD (Table 4). Model simulations conducted by the International Monetary Fund (IMF) provide estimates of the changes in global GDP based on three distinct scenarios corresponding with the length and frequency of outbreaks (Figure 10). In all scenarios, an increase in GDP is estimated by 2024, but not to pre-COVID levels.

- Increased debt











The Inter-American Development Bank (IDB) estimated that gross public debt in LAC would rise on average to 70-73% of GDP in 2022 from 57% of GDP in 2019. SIDS rely on export revenues, primarily from tourism for the majority of SIDS (see Table 1), to service their debt. This is counteracted by the high reliance of SIDS on food imports. As the COVID-19 crisis simultaneously shrinks tourism revenues and remittance flows, outflows to service debt and pay for food imports will remain constant or even rise leading to increased debts (Figure 11). In a typical year, the external debt servicing burden of SIDS as a group is 5.3% of their GDP (Figure 12). Many Caribbean SIDS largely borrow from private creditors to finance their chronic and large trade and current account deficits (Figure 12). This results in higher borrowing costs, compared to those from multilateral and bilateral sources, and large risk premiums because of SIDS' chronic trade and current account deficits, relatively low level of international reserves and their high vulnerability to natural disasters (see Box 3.1).



Source: UN DESA calculations, based on data from IMF, World Economic Outlook database.

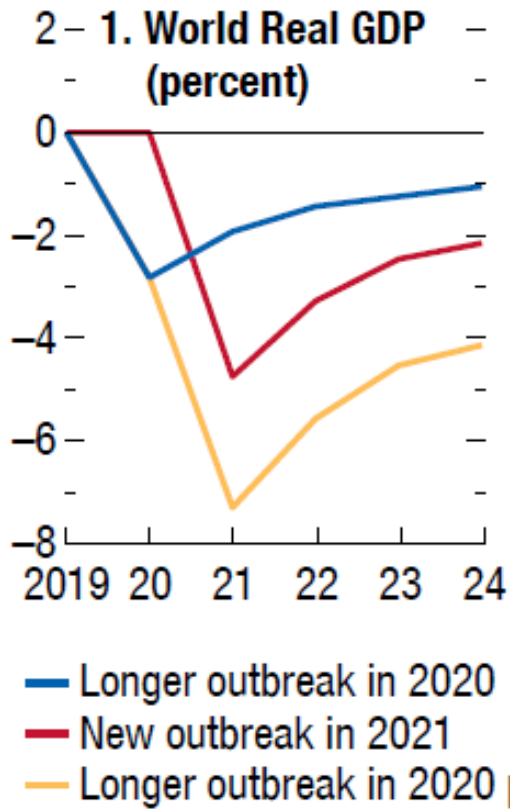
Figure 9 Projected GDP growth rate of selected country groups, 2020 (source UNDESA 2020b)

Table 4 Estimated fall in GDPs and resulting financial assistance needed for Caribbean SIDS
(source UNCTAD 2020b)

	Estimated Fall in GDP (%)	Financial Assistance Needed (million USD)
 St. Kitts and Nevis	16%	92
 Grenada	14%	137
 St. Vincent and the Grenadines	12%	60
 Antigua and Barbuda	11%	243
 St. Lucia	11%	250
 Bahamas, The	10%	846
 Dominica	10%	28
 Barbados	9%	369
 Jamaica	9%	775
 Trinidad and Tobago	2%	135

Source: UNCTAD based on data from UNCTADStat, WTTC, World Bank, IMF and national statistics. Aggregates figures are GDP weighted averages. SIDS are defined according to the UNCTAD classification.

• Created with Datawrapper



Source: IMF, G20 Model simulations.

Figure 10 Alternative Evolutions in the Fight against COVID-19 (Adapted from IMF 2020)

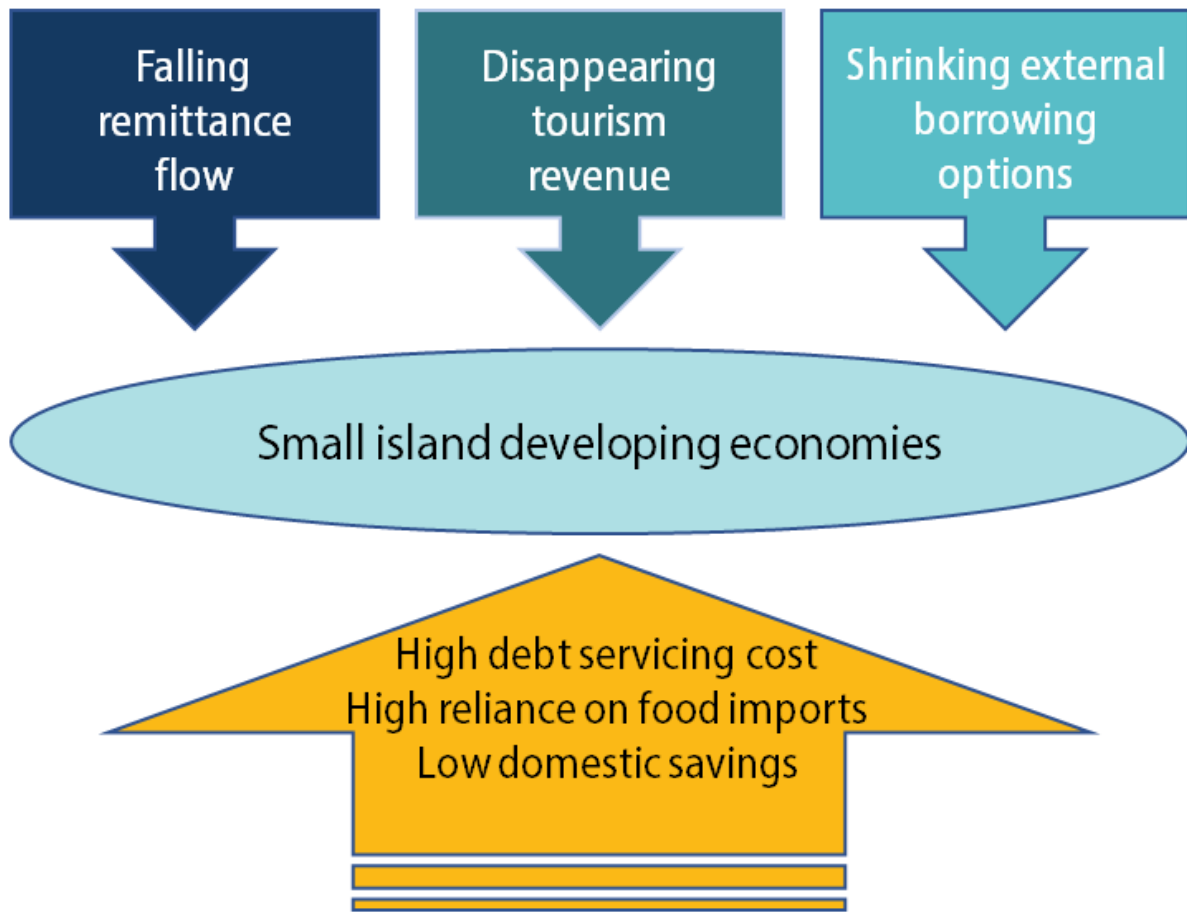
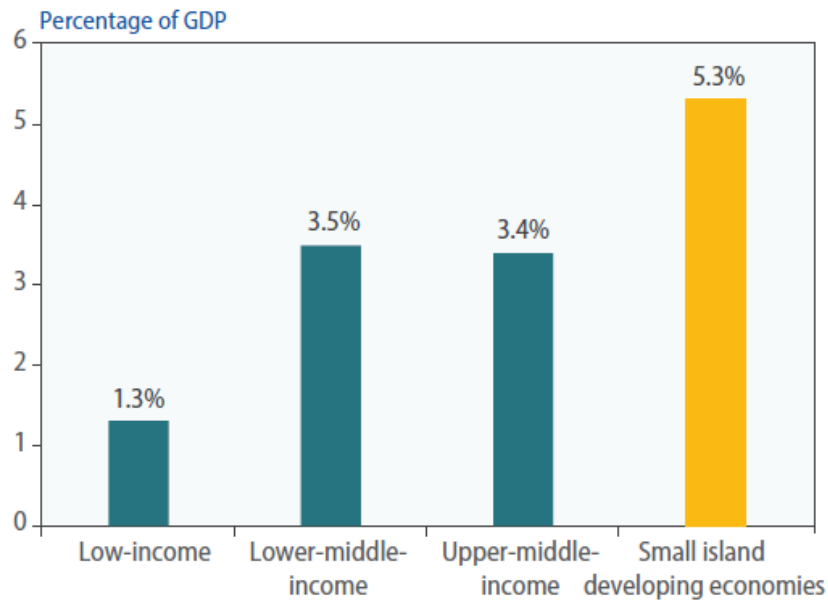
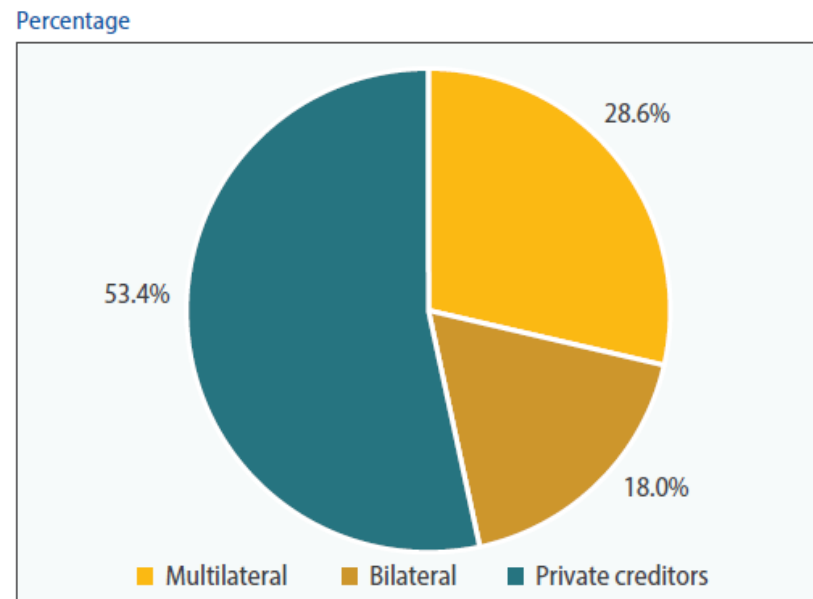


Figure 11 Transmission channels of COVID-19's economic impact on SIDS (source UNDESA 2020b)



Source: UN DESA, based on data from World Bank, World Development Indicators database.



Source: UN DESA, based on data from World Bank, World Development Indicators database.

Figure 12 Figure Left: External debt servicing burden of selected country groups, 2018; Right: Share of external debt of small island developing economies, by creditor type, 2018 (source UNDESA 2020b)

- Increased trade deficits

Most SIDS run large trade deficits, with tourism accounting for most of exports, while food, oil and other essentials representing the bulk of imports. In 2020, it is estimated that SIDS suffered a 70% drop in travel receipts and a 28% drop in port calls (exports) while reliance on imports remained high (UNCTAD 2021a).

Maritime transport underpins supply chains with shipping and ports estimated to handle over 80% of global merchandise trade by volume and more than 70% by value, carried by over 50,000 commercial vessels worldwide (UNCTAD 2021b). SIDS depend heavily on maritime transport for access to the global marketplace. A 25% reduction in marine transport (shipping) globally has been estimated, causing significant losses to the industry (Northrop et al. 2020).

See infographic (Figure 13) for trade related statistics.

The economic impacts will vary across Caribbean SIDS and will be influenced by existing vulnerabilities. The multidimensional Vulnerability Index (MVI) suggest that Antigua and Barbuda, Grenada, Guyana, Saint Kitts and Nevis, Saint Lucia, Suriname and Trinidad and Tobago may be impacted more due to higher economic vulnerabilities.



Services are crucial for SIDS

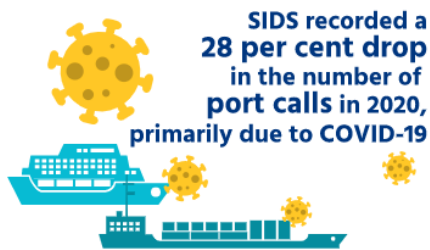


Figure 13 Infographic pertaining to trade (imports and exports) regarding SIDS (source UNCTAD 2021a)

3.2.1 Livelihoods

COVID-19 has negatively affected livelihoods throughout Caribbean SIDS, given its far reaching impacts on most (if not all) sectors including agriculture, construction, finance and tourism inter alia. As a result, unemployment levels have shown increases in 2020, compared to 2018 (Table 5). Informal (individuals with casual work arrangements or no fixed salary) and non-essential workers have been significantly impacted by lockdown and physical distancing measures imposed (Table 6). Due to lack of social protection systems (e.g. health insurance and unemployment benefits), these categories of workers are finding it difficult to deal with a complete lack of income since working remotely is usually not an option.

Tourism

Tourism has been identified as the third largest export sector of the global economy and to possess an economic and social footprint that dwarfs that of any other economic sector (UNWTO 2020). Within Caribbean countries, tourism can contribute >25% to GDP (UN Women 2020a, UNCTAD 2021a) and can represent anywhere from 2-90% of exports for Caribbean SIDS (Figure 14). The closing of borders to arrest the spread of the virus, along with the various lockdown mechanisms drove inbound and domestic tourism to halt from April 2020 (see Figure 15). It was reported that Barbados lost \$1.8 million in cancellations, and bookings were anticipated to go down to zero by September 2020 (UN Women 2020b). Figure 14 highlights that all regions of the world experienced a decline in tourist arrivals in January to May of 2020, with the Americas experiencing a 47% decline.

These declines have led to a significant increase in the level of unemployment for persons working directly in the tourism sector (hotels, restaurants, travel agencies, aircrafts, cruises, resorts) and those indirectly connected to the sector (e.g. restaurant suppliers, construction facilities and handicraft producers). Table 1 highlights that for many SIDS, tourism has a total contribution to employment of >30% with a high of 89.3% for Aruba.

As indicated by the international tourism revenues, share of total exports (Figure 14) and the composition of tourism revenues (Figure 15: particularly the inbound tourism) the impacts on the tourism sector, brought about by COVID-19, will vary among SIDS, with SIDS such as Saint

Table 5 Trends in unemployment (% of population) source: UNDP COVID-19 Data Futures Platform¹⁶

SIDS	2018	2020
Aruba	7.3	7.5
Bahamas	10.4	15.2
Barbados	10.1	13.4
Belize	9.4	18.7
Dominican Republic	5.7	9
Puerto Rico	9.2	13
Suriname	9	9.5
Trinidad and Tobago	4.9	5.0

Table 6 Informal economy workers significantly impacted by lockdown and physical distancing measures (2020) (source ILO 2020)

	Informal employment (millions)	Significantly Impacted Informal workers (millions)	Informal Significantly Impacted (%)
World	2 060	1 564	76
By region			
Africa	391	325	83
Americas	192	169	88
LAC	158	140	89
Arab States	31	27	89
Asia and Pacific	1 346	988	73
Europe and Central Asia	100	65	64

¹⁶ <https://data.undp.org/>

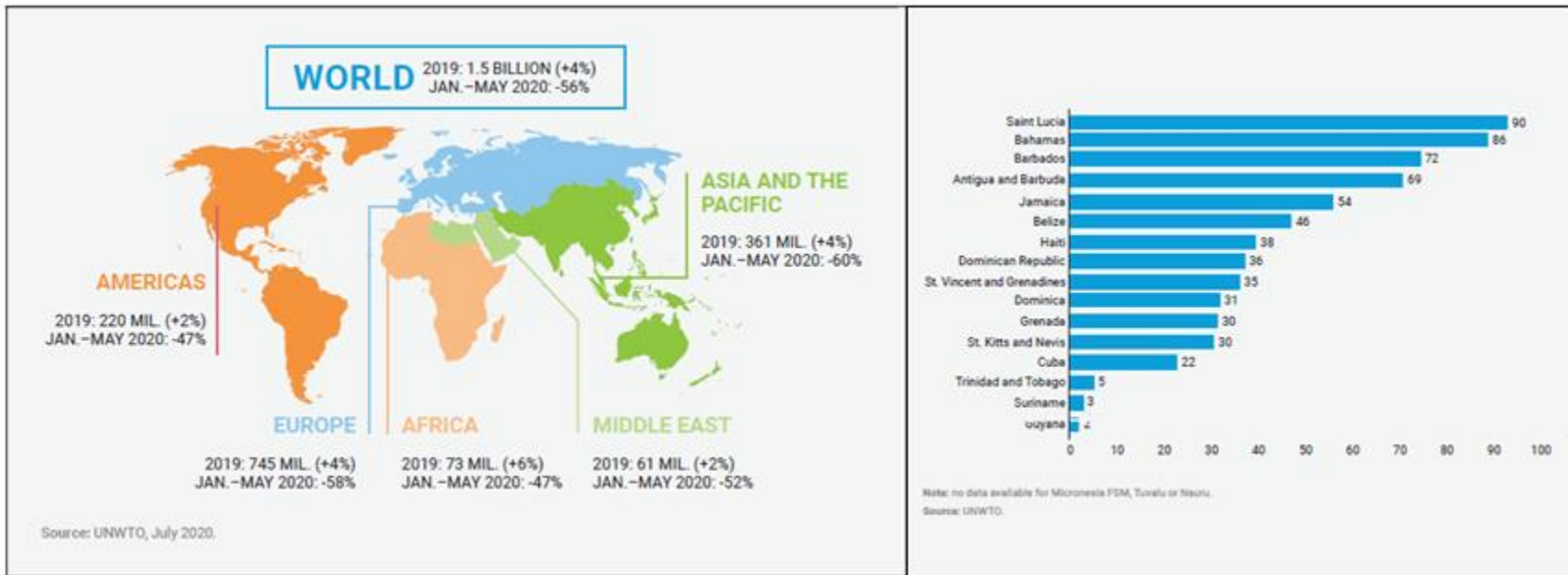
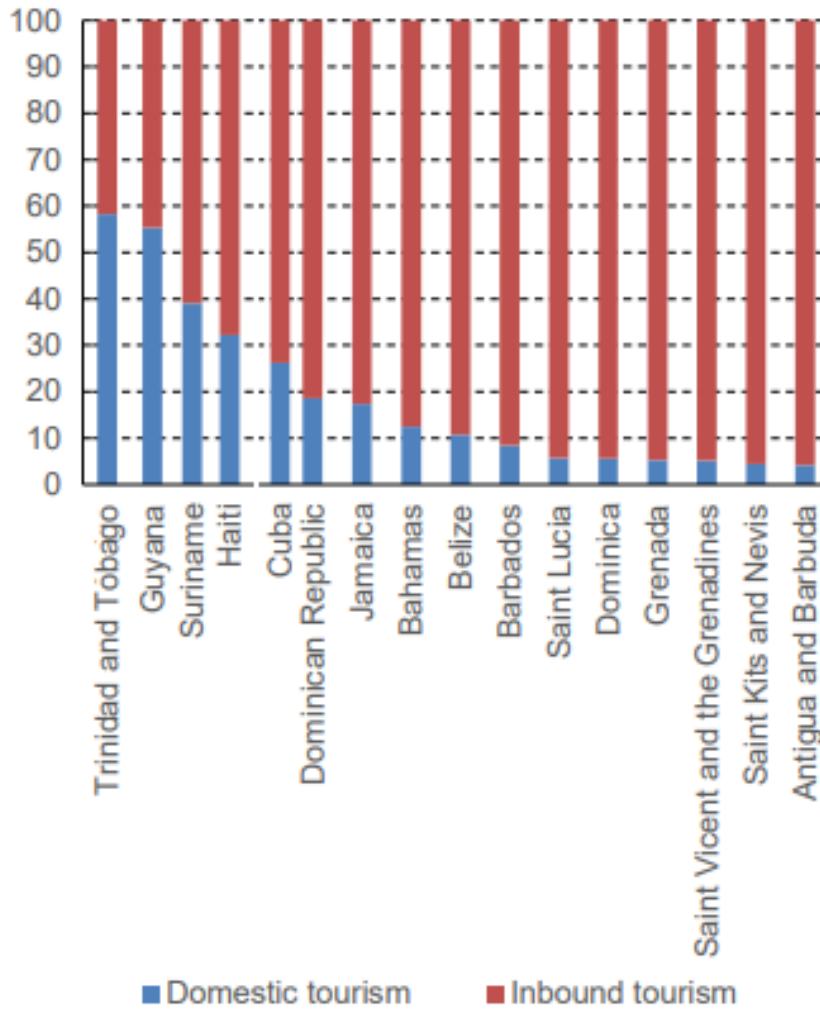


Figure 14 Left: International tourist arrivals, Jan–May 2020 (percentage change), **Right:** Cartagena Convention SIDS international tourism revenues, share of total exports (percentage) (adapted from UN 2020b)



Sources: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from the World Travel & Tourism Council (WTTC).

Figure 15 Caribbean composition of tourism revenues by domestic and inbound travel 2019 (source Mulder 2020)

Lucia, The Bahamas, Barbados, Antigua and Barbuda and Jamaica expected to be impacted more due to their high level of inbound tourism and the significant contribution of tourism to their GDPs.

Fisheries and aquaculture

In 2018, global fisheries and aquaculture production reached nearly 179 million tonnes, with capture fisheries representing 54% and aquaculture 46% (FAO 2021a). The fisheries sector, including the directly (commercial, artisanal and subsistence fishing) and indirect (processing, canning, wholesale, trade, equipment repair etc.) sectors, has experienced increasing levels of unemployment (Figure 16). Containment measures have impacted the operations of fishers (with closing of markets and other facilities utilised in the preparation and storage of fish and fish products) and the demand for fish has decreased, especially with the slowing of the tourism sector which has led to the dwindling of markets for fisheries that are dependent on a tourism market. The closure of ports has also reduced opportunities for the exportation of fish and the generation of foreign revenue.

Many persons employed within the fisheries sector fall under the category of informal and non-essential workers and thus have been significantly impacted due to limited social protection systems being in place.

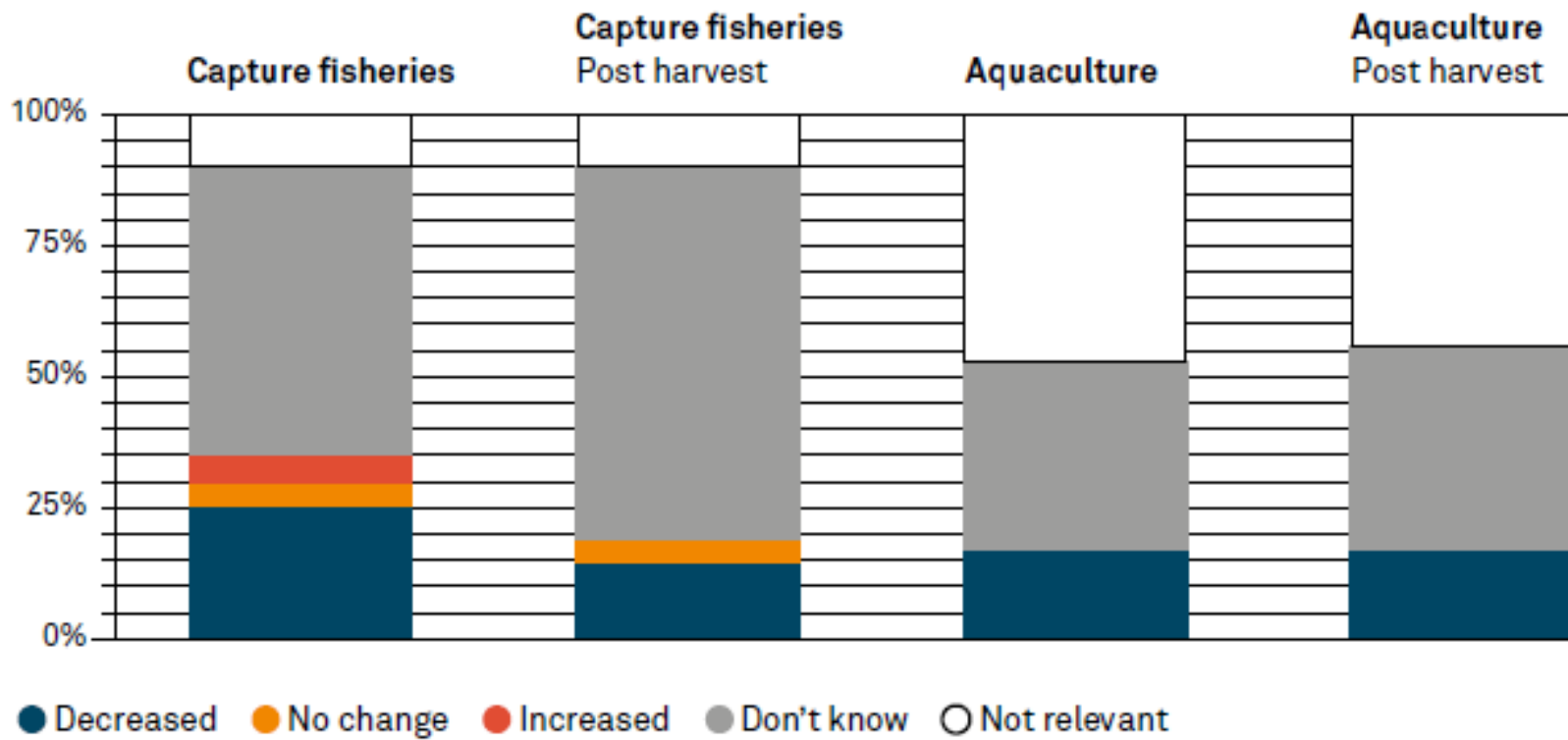


Figure 16 Impact of COVID-19 on employment (source FAO 2021b)

3.2.2 Poverty

The dimensions of poverty focused on in this report include health (nutrition) and education (school attendance). From 1999-2019, the number of people living in extreme poverty (measured as the number of people living on less than \$1.90 per day) fell by >1 billion people (Lakner et al. 2021). However, Lakner et al. (2021) estimated COVID-19 to push between 119 and 124 million people into extreme poverty in 2020, setting back poverty reduction by around three years (Figure 17). The impacts of COVID-19 are predicted to be greater in poor and marginalized groups (such as informal and non-essential workers) due to lack of access to adequate healthcare, savings and other coping mechanisms (Hughes et al. 2021). Table 7 highlights the significant increase in informal workers forced below the poverty line because of COVID-19. The pandemic therefore significantly threatens to reverse progress made regarding poverty alleviation and thus the achievement of sustainable development.

A recent study conducted by Hughes et al. (2021) utilised the International Futures forecasting system to provide projections for the path of progress towards the SDG targets related to poverty under the scenarios of No COVID, COVID and High Damage (Table 8). Hughes et al. (2021) reports that just 110 out of 186 countries would have achieved the SDG goal of eliminating poverty by 2030 in a world without COVID-19 and by 2050 50 countries would not have eliminated extreme poverty and more than 400 million people would still be living on less than \$1.90 per day (Figure 18). Analyses conducted estimated the pandemic to result in 48 million more people in poverty in 2030 than projected in the No COVID scenario. Hughes et al. (2021) further reports that some of the already realised impacts of the pandemic includes increases in poverty and food insecurity, reduced access to healthcare, and interrupted educational attainment.

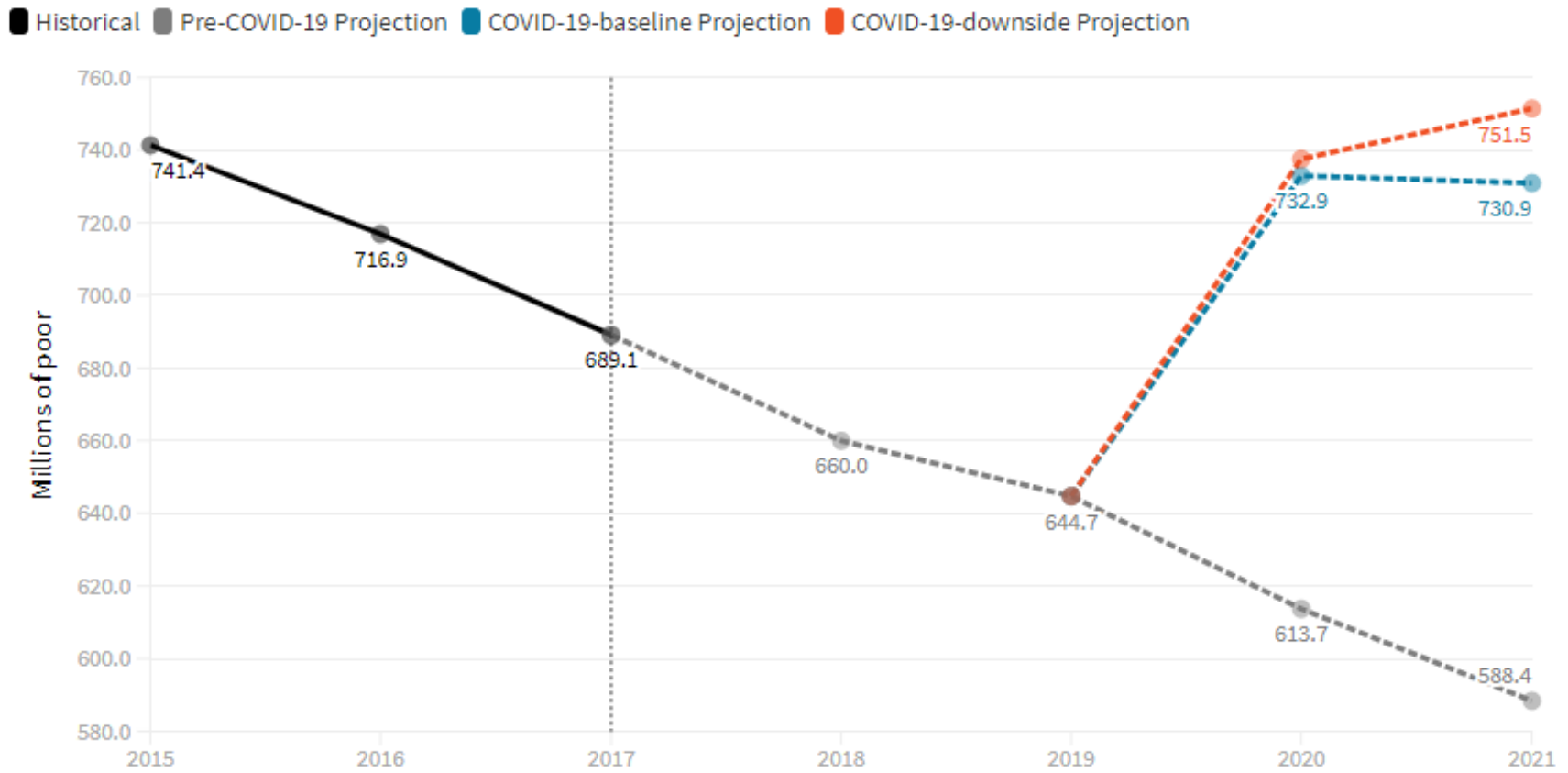


Figure 17 Nowcast of extreme poverty, 2015-2021 (Source: Lakner et al. 2020 [updated], PovcalNet, Global Economic Prospects)

Table 7 Relative poverty among informal workers as a result of COVID-19 (source ILO 2020)

	Relative poverty (incidence within group)		
	Before COVID-19		During COVID-19 (expected incidence of relative poverty)
	Informal workers	Informal workers	Difference (% points)
World	25,6	59,4	33,7
By region			
Africa	20,7	82,9	62,1
LAC	36,1	90,1	54,0
Northern America	17,6	77,3	59,7
Asia and the Pacific	21,9	36,3	14,4
Europe and Central Asia	34,1	80,2	46,1

Table 8 Summary of scenario assumptions (source Hughes et al. 2021)

Scenario name	Description
<i>No COVID</i>	A counterfactual scenario projecting the path the world was on prior to the COVID-19 outbreak, using growth rate projections from before the pandemic.
<i>COVID</i>	A scenario projecting a most likely path of development in light of the COVID pandemic, using the most recent projections of COVID-19's effects on economic growth and mortality.
<i>High Damage</i>	A scenario in which the COVID-19 pandemic has considerably greater negative effect on growth, inequality, and debt.

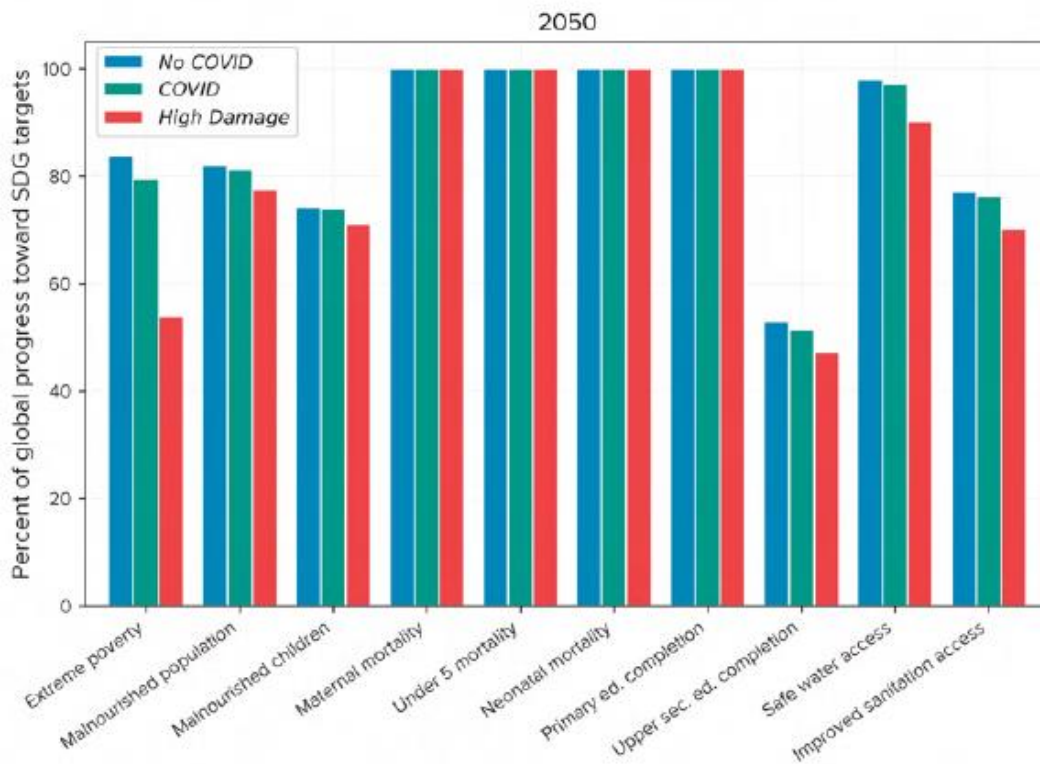
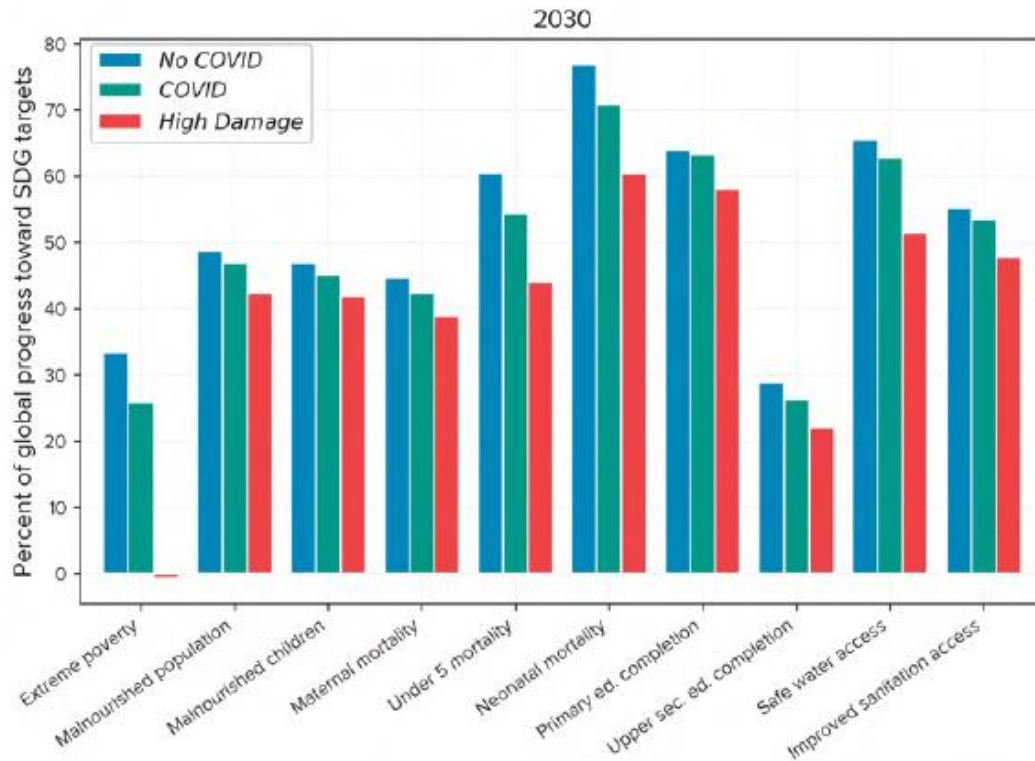


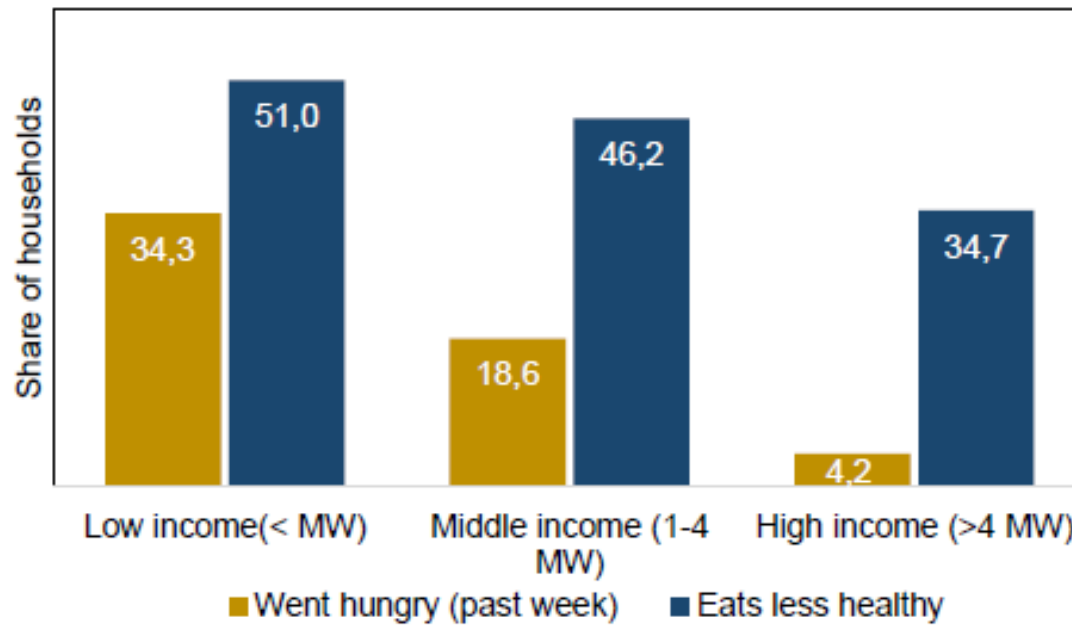
Figure 18 Impact of COVID-19 on global progress towards SDG targets (Source Hughes et al. 2021)

Health (nutrition)

COVID-19 has impacted food systems, due to disruptions in food supply chains owing to logistics, transportation and labour. Research suggests declines in agrifood exports could reach as high as 24 and 30% for developed and developing countries respectively (Laborde, Martin, et al. 2020). With decreasing incomes, access to and ability to purchase higher quality food may decrease, leading to declines in overall diet quality and increased malnutrition (Figure 19). The potential of rising food insecurity, especially for vulnerable groups, has been increased by COVID-19. FAO forecasts anticipated an additional 83 to 132 million undernourished people in 2020. Figure 19 highlights the fact that in all income classes, the threat of persons going hungry is real and the likelihood of eating less healthy increases as access to healthy food decreases along with its increasing prices.

The prevalence of NCDs in the Caribbean, owed in part to poor diets, has increased the susceptibility of SIDS' populations to COVID-19. COVID-19 thus poses a real threat of exasperating this issue, reducing the health of populations in SIDS and increasing their vulnerability to other virus and disease which may thrive in such systems with a high prevalence of poor health.

See infographic (Figure 20) for nutrition related statistics.



Source: IDB, online COVID-19 survey (<https://www.iadb.org/en/research-and-data/idb-coronavirus-survey>)
 Note: Income categories based on pre-pandemic (Jan. 2020) total household income relative to the national minimum wage (MW).

Figure 19 Nutritional impacts of the crisis in the Caribbean: Hunger and change in diet (percent) (source IDB 2020a)

WASTING



An additional **6-7 million children** under 5 may have suffered from wasting or acute malnutrition in 2020.

EQUITY



Stunting among the poorest children is **2.4 times higher**

The poorest children also have **poorer diets**

COVID-19 is increasing global poverty and the nutritional status of the poorest people will deteriorate further.

VITAMIN A



Disruptions to service may have resulted in **160 million children under 5 missing a crucial dose of Vitamin A.**

WOMEN & GIRLS



COVID-19 is disrupting **women's** access to nutrition services. **Girls** may drop out of school due to the economic distress of losing school meals.

HUNGER



As many as 132 million people may have gone hungry in 2020, of that **44 million are children.**



FOOD INSECURITY

Countries are reporting increased food insecurity, e.g. in Lebanon, the percentage of people worried about not having enough food rose from **31% in 2018 to 50% in 2020.**



SCHOOL MEALS

370 million children may have missed nutritious school meals.

Figure 20 Infographic pertaining to the impact of COVID-19 on nutrition (source UNICEF Data¹⁷)

¹⁷ <https://data.unicef.org/covid-19-and-children/>

Education (school attendance)

With lockdowns imposed, schools closed and face-to-face classes became a thing of the past (Table 9). A movement to distance education (online, radio or television) was embarked upon (Table 10). The initial phase of the shift was slow, as schools had to figure out appropriate digital technologies to utilise and build capacity among teachers to effectively be able to deliver their lessons. From the perspective of the student (and their parents), this required access to the internet, appropriate electronic devices (e.g. desktop computer, laptop, tablet, iPad etc.) and the capacity to effectively use the required technologies to access teachers and classes. Not all households with children were able to meet the above requirements because of lack of access to the internet, lack of access to appropriate electronic devices, lack of technical capabilities to use required technologies or some combinations of these.

This significantly impacted the more vulnerable households and students (those that lacked the means to readily transition to this new modality), increasing the risk of students dropping out of school or lagging behind in their studies. It was expected that the effective out-of-school rate for primary education would rise to 86% and 74% in low and medium human development countries, respectively. The United Nations Children's Emergency Fund (UNICEF) estimated that more than 168 million children have lost a full year of education because of school closures due to COVID-19 lockdowns (UNICEF 2021), while data from the United Nations Educational, Scientific and Cultural Organization (UNESCO) shows that education has been significantly disrupted for over 800 million students worldwide who lost two thirds of an academic year on average.

The move to remote teaching places greater stress on households with essential workers that are not working from home and those where time may be allocated to other areas such as domestic work and the care of the elderly or sick. Younger children tend to require closer supervision and parental assistance.

What implications for student's present and future development is yet to be seen, but COVID-19 has exacerbated existing educational divides. According to the World Bank (2019), the lack of

Table 9 Number of countries/children where schools have remained closed since March 2020
(source UNICEF 2021)

Region	Schools have remained closed almost an entire year (# of countries)	School children affected Number (in millions)	School children affected Per centage
East Asia & the Pacific	1	25	15%
Middle East & North Africa	3	9	5%
East & Southern Africa	0	n.a.	n.a.
Western & Central Africa	0	n.a.	n.a.
Europe & Central Asia	0	n.a.	n.a.
Latin America & the Caribbean	9	98	58%
South Asia	1	37	22%
TOTAL	14	168	100%

Table 10 Interventions in Latin American and Caribbean countries to implement distance education (source UNDP 2020b)

Country	Tools for students	Media			Parental guide	Parental guide details	Tools for teachers
		Online	Radio	TV			
Antigua and Barbuda	Implementation of online courses for secondary education, and creation of an online blog for each primary school.	Yes	Yes	Yes	Yes	Articles on supporting students with distance education	
Aruba	The Ministry of Education set up online platforms.	Yes	No	No	No		
Bahamas	The Ministry of Education launched live online primary and secondary schools.	Yes	Yes	Yes	Yes	Guides for online learning and the Ministry of Education's online portal.	Online resources for teachers from preschool through to eighth grade.
Barbados	Implementation of distance learning through Google Classroom.	Yes	No	No	No		Online platform with videos for some subjects, such as health and mathematics, among others.
Belize	Implementation of home learning programmes through online tools and teacher training programmes.	Yes	No	No	Yes	Information published in the Ministry of Education.	Provision of reading or online materials for teachers to enable the continuity of the learning process.
Cuba	Distance learning through television and an online platform.	Yes	No	Yes	N/A		Individual and small-groups teacher training.
Dominica	Online distance education and through printed materials for students without internet access.	Yes	No	No	N/A		
Dominican Republic	Online learning through online platforms, radio and television. Installation of over 1,000 internet access stations.	Yes	Yes	Yes	Yes	YouTube guides for parents on distance learning.	
Grenada	Online distance learning.	Yes	No	No	N/A		
Guyana	Dissemination of educational content through television, radio and online platforms.	Yes	Yes	Yes	Yes	Resources for parents available online.	Advice on the learning process for teachers.
Haiti	Design of online platforms.	Yes	No	Yes	N/A	UNICEF has created videos for parents on how to deal with the current crisis.	The National Early Childhood Commission has supported teachers through WhatsApp and online media.
British Virgin Islands	Implementation of teaching through digital media. The Ministry of Education has focused on providing technological resources to households that lack these resources.	Yes	No	No	No		
Cayman Islands	Implementation of techniques and tools to ensure that the students' learning process continues.	Yes	No	No	Yes	Instructions for parents to achieve a distraction-free environment to sustain learning.	
Turks and Caicos Islands	Organization of online education by education centres.	Yes	No	No	No		
Jamaica	Distance education through online platforms, radio, television and printed materials.	Yes	Yes	Yes	Yes	Materials to maintain the organization and continuation of the learning process.	
Saint Kitts and Nevis	Teacher training and distance education programmes through television and Internet.	Yes	No	Yes	Yes	Encouraging students to do their schoolwork.	
Saint Lucia	The Ministry of Education enabled online learning.	Yes	No	No	No		
Suriname	Distance education published daily.	Yes	No	Yes	N/A		
Trinidad and Tobago	The Ministry of Education has created an online learning portal and provided computers to students without access to them.	Yes	No	No	No		

Source: Created based on data collected by [UNICEF](#), each country's Ministry of Education, the [Center for Global Development](#) and the websites cited in the table.

foundational learning undermines sustainable growth and poverty reduction and threatens countries' efforts to build the human capital needed achieve sustainable development.

3.2 Socio-cultural

3.2.1 Gender

The two major impacts of COVID-19 being observed are increases in gender equality and gender-based violence (GBV), which are only acting to widen gender gaps and worsen the already vulnerable situation of girls and women in LAC.

See infographic (Figure 21) for gender related statistics.

Gender inequality

Gender inequality can be measured using the gender inequality index (GII), which shows the loss in potential human development due to disparity between female and male achievements in three dimensions: reproductive health, empowerment and the labour market (Figure 22). Reflecting how women are disadvantaged in these three dimensions, the index ranges between 0 and 1 with higher GII values indicating higher inequalities between women and men and thus higher loss to human development. Collectively, SIDS have a GII of 0.458, while GII for individual Caribbean SIDS range from 0.304 (Cuba) to 0.636 (Haiti; Figure 22).

Gender inequality, manifesting itself in employment and salaries, existed pre COVID with women holding less secure jobs (more likely to be employed in the informal sector) and experiencing higher incidence of part-time work, lower salaries and lower social protection (UN 2020a). In addition, the unpaid care and domestic workload generally falls disproportionately on women, minimising opportunities for them to be part of the paid workforce. Their capacities to absorb economic shocks is therefore less than that of men. Since the onset of the on-going pandemic, the unpaid care workload has increased with children out-of-school, overwhelmed health services and heightened care needs of older and sick persons (UN 2020a). This limits the availability of time for women to carry out productive activities and do paid work. COVID-19 has therefore placed the advances made in gender equality at risk of being pushed back and threaten to deepen pre-existing inequalities (UN 2020a). Gutiérrez, Martin and Ñopo (2020)

The unpaid care and domestic work performed by women is critical for sustaining societies, has immense economic value and needs to be supported through adequate policies.



Women on average spend

4.1 hours/day

on unpaid care and domestic work, compared to

1.7 hours/day

for men



Women's unpaid contributions to healthcare equate to

2.35%

of global GDP, or the equivalent of

US\$ 1.5 trillion



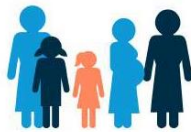
When women's contribution to all types of care (not just healthcare) is considered, this figure rises to

US\$ 11 trillion

The Shadow Pandemic: Violence Against Women and Girls and COVID-19

Globally,

243 million



women and girls aged 15-49 have been subjected to sexual and/or physical violence perpetrated by an intimate partner in the previous 12 months.

The number is likely to **INCREASE** as security, health, and money worries heighten tensions and strains are accentuated by cramped and confined living conditions.

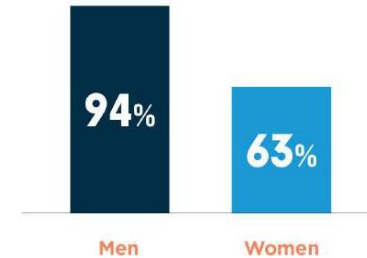
There will be aggravated impacts of COVID-19 for women already living on the economic margins

Women spend

3x

as many hours as men in **unpaid care and domestic work**, limiting their access to decent work.

More men between the ages of 25 to 54 are in the **labour force** than women:



The global **gender pay gap** is stuck at

16%

with **women paid up to 35% less than men** in some countries.



740

million women

globally work in the **informal economy**.

Globally,



65%

of women

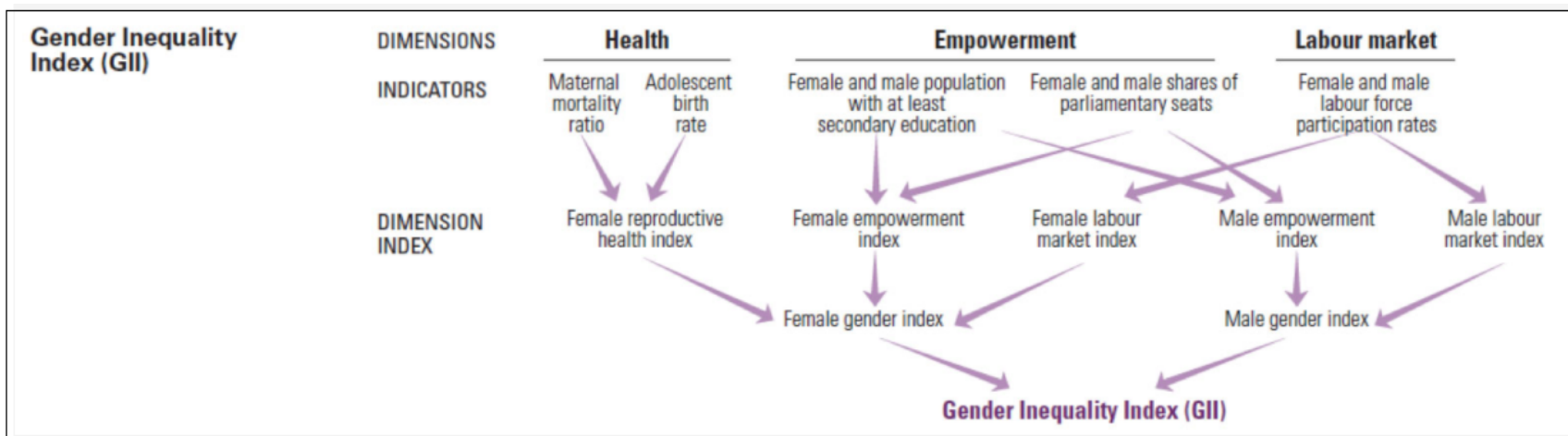
had an **account at a financial institution** in 2017, compared to



72%

of men

Figure 21 Infographic pertaining to gender and the impacts of COVID-19 (source UN 2020a)



Country	Value (2019)
Antigua and Barbuda	..
Bahamas	0.341
Barbados	0.252
Belize	0.415
Cuba	0.304
Dominica	..
Dominican Republic	0.455
Grenada	..
Guyana	0.462
Haiti	0.636

Country	Value (2019)
Jamaica	0.396
Saint Kitts and Nevis	..
Saint Lucia	0.401
Saint Vincent and the Grenadines	..
Suriname	0.436
Trinidad and Tobago	0.323
Latin America and the Caribbean	0.389
Least developed countries	0.559
Small island developing states	0.458
World	0.436

Figure 22 Dimensions of the gender inequality index and index values for Caribbean SIDS (source UNDP 2020c).

reports that 33% of women and 30% of men, who worked before the pandemic, were unable to go out to work. This translates into a 22% loss of employment income for women and 26% for men. The lower availability of work for women and time to work indicate that some segments of women in situations of poverty and vulnerability will experience more accentuated impacts due to the crisis. It was estimated that higher rates of female unemployment and more women leaving the labour market entirely would have been observed in 2020. Figure 23 highlights the fact that the LAC region presented the highest percentage of domestic female workers that were significantly impacted in 2020.

Gender-based violence

Any harm or potential of harm perpetrated against a person or group on the basis of gender and includes different expressions of violence, such as physical, sexual and verbal abuse; sexual harassment; stalking; rape; intimate partner violence; child marriage; economic deprivation and human trafficking is regarded as gender-based violence. Described as a silent pandemic, GBV is believed to be rooted in structural gender inequalities and occurs in all societies as a means of control, subjugation and exploitation (IUCN 2020).

COVID-19 is reported to have increased gender-based violence (UN 2020a, UN Women 2020b), in particular domestic violence. Gutiérrez, Martín and Ñopo (2020) estimated an increase of about 30% in cases of domestic and partner violence. In Guyana, for example, Indigenous Wachipan women known to lead community efforts to control the entrance of mining in their communities have reported an increase in threats from miners during lockdowns.

See Box 3.2 for information linking GBV to the environment.

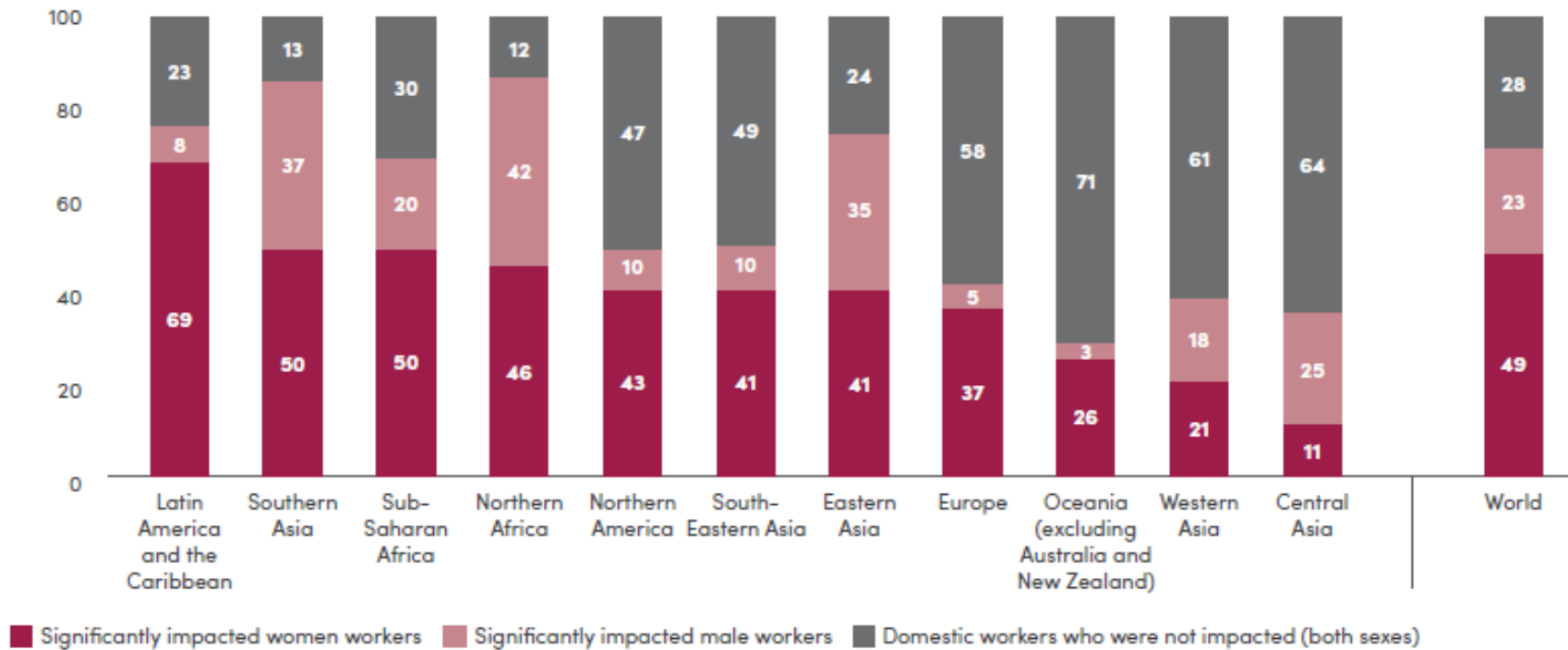


Figure 23 Proportion of domestic workers significantly impacted due to COVID-19, by sex, 2020 (percentage) (source UNDESA 2020a)

Box 3.2. Gender based violence and its link to the environment (source: IUCN 2020)

GBV can be used to assert or maintain control over natural resources:

- domestic violence to prevent women's land ownership
- sex-for-fish extortion in fishing communities
- negotiate or reinforce inequitable power in all contexts, including as a weapon against environmental defenders (e.g. rape threats and smear campaigns).

GBV can be exacerbated in the face of environmental stressors, such as climate change, extractives and environmental crimes:

- when the control over increasingly scarce or degraded resources and livelihood opportunities results in higher tensions (e.g. exacerbating domestic violence)
- increased negative coping strategies (e.g. child marriage in the aftermath of disasters)
- reduced resilience for families and communities (e.g. risks of sexual exploitation and human trafficking in legal and illegal extractive industries).

GBV can be combatted:

- document and collect data on gender-based violence
- increased information-sharing to prevent and respond to GBV, especially in the face of COVID-19
- ensure the participation of diverse women and women's groups and organisations in decision-making

3.2.2 Culture

Culture can be regarded as the social behaviour and norms found in human societies, as well as the knowledge, beliefs, arts, laws, customs, capabilities, and habits of the individuals in these groups. Many cultural norms include the element of socialising for various reasons such as dialogue and exchange, celebration, upholding of indigenous and religious practices and traditions inter alia. The imposed lockdowns, quarantines and physical distancing measures have thus limited such social interactions, forcing some to move to an online format and others to be abandoned altogether. Many festivals and carnivals, for example Barbados' Crop Over (Kadooment) Festival, Trinidad and Tobago's Carnival and Grenada's Spicemas Festival, which have cultural significance has also evolved into major income generation for locals and a channel for receiving foreign exchange.

Like many other industries, the cultural and creative industries (Figure 24) have also been negatively impacted by COVID-19. Across the six cultural domains, cultural and natural heritage and performance and celebrations are the two that have experienced extreme disruptions (Figure 24). The livelihoods of many cultural professionals have thus been seriously jeopardized.

UNESCO World Heritage Sites intersects culture and the environment. These sites are said to contain cultural and natural heritage of outstanding value to humanity. UNESCO highlights these sites as drivers of employment, knowledge dissemination, scientific research and cultural life. Many sectors and sub-sectors are reported to be dependent on the conservation of World Heritage Sites. COVID-19 has impacted visits to these sites and in some cases the work required to maintain the sites at their high cultural and natural values. See infographic (Figure 25) for World Heritage Sites related statistics.

Overall, the true impact of COVID-19 on culture may be hard to qualify and/or quantify but could significantly impact the well-being of certain groups within societies (such as indigenous communities and religious groups), the access to previously available income to obtain basic human needs (especially for entertainers and artists) and the integrity of the sites themselves.

A. CULTURAL AND NATURAL HERITAGE



B. PERFORMANCE AND CELEBRATION



C. VISUAL ARTS AND CRAFTS



SOURCE: Unesco (2009)

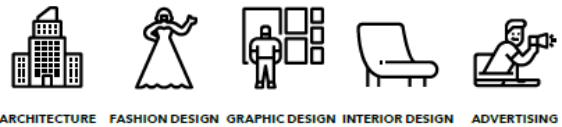
D. BOOKS AND PRESS



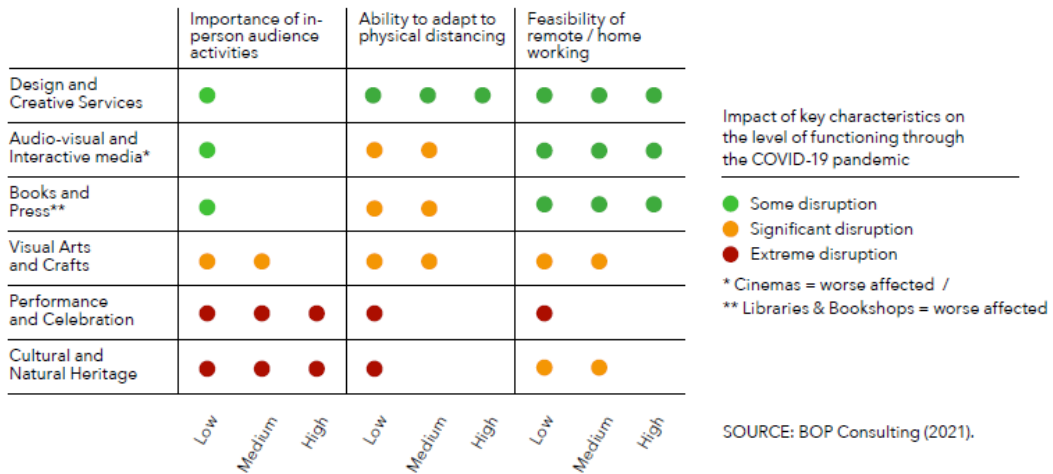
E. AUDIO-VISUAL AND INTERACTIVE MEDIA



F. DESIGN AND CREATIVE SERVICES



KEY CHARACTERISTICS THAT AFFECT THE LEVEL OF DISRUPTION EXPERIENCED ACROSS THE SIX CULTURAL DOMAINS



SOURCE: BOP Consulting (2021).

Figure 24 Components of cultural domains and COVID-19 impacts across them (source UNESCO 2021a)

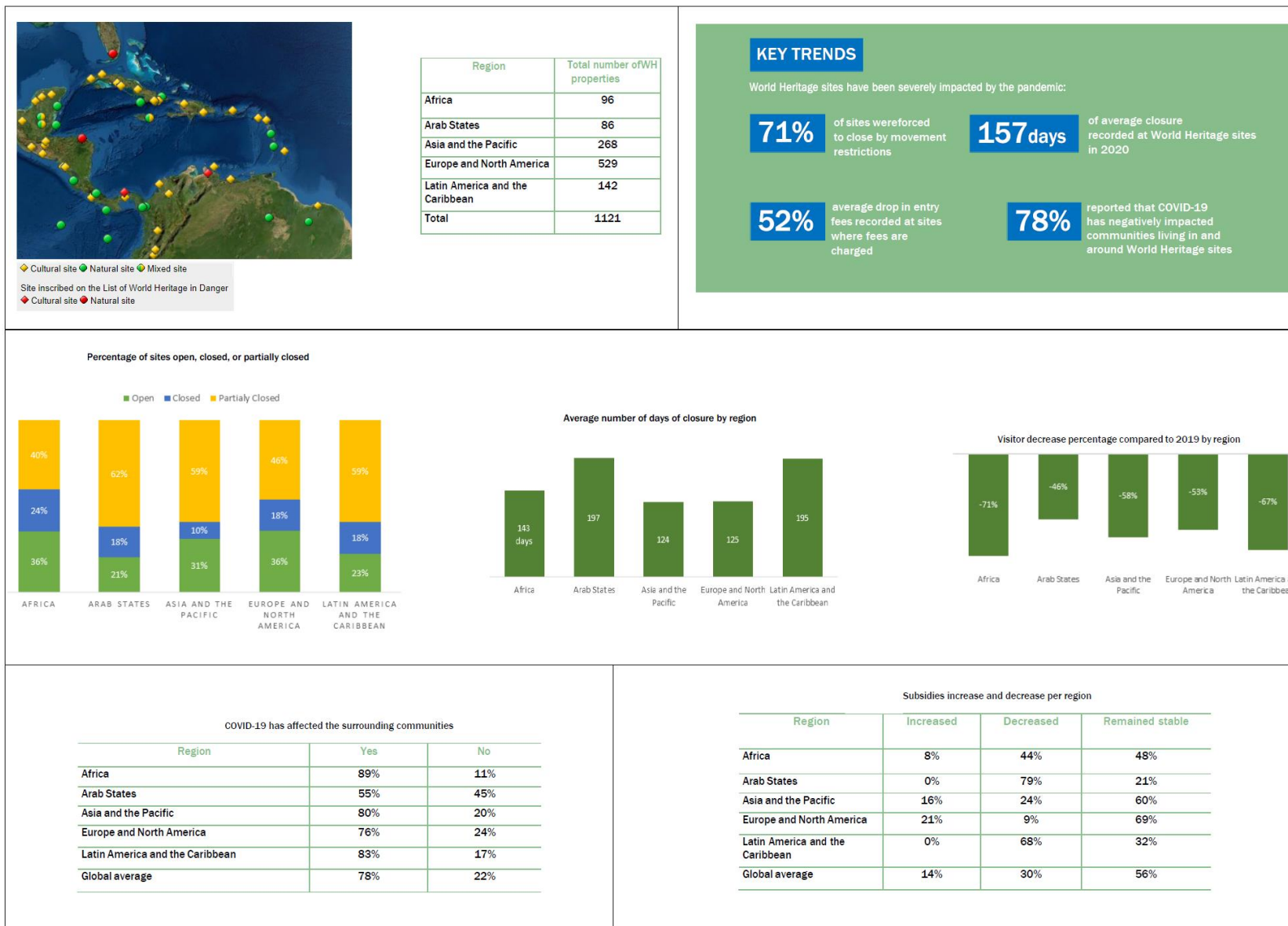


Figure 25 Infographic pertaining to World Heritage Sites and the impact of COVID-19 (source UNESCO 2021b)

3.3 Environment

It must be noted that pre COVID-19, several trends related to nature were not moving in the right direction. These included greenhouse gas emissions, land degradation, biodiversity loss, wildlife trafficking, absolute material footprints, overfishing and the deterioration of coastal waters.

Regarding the environment, both positive and negative COVID-19 impacts have been reported. Positive environmental impact include reduction in carbon emissions as a result of decreased levels of transportation and economic activity and its positive impact on reversing climate change. It was estimated that global CO₂ emissions for 2020 would decline by 8% (IEA 2020). However, given the long-term build-up of greenhouse gas in the atmosphere and the slow rate of change of carbon dioxide in the atmosphere, this is likely to be “insignificant” in moving towards climate change goals (e.g. limiting global warming to well below 2°C as set out in the Paris Agreement¹⁸). Reduced pressure on terrestrial and marine ecosystems, due to reduced human traffic and the various anthropogenic stresses it brings, is postulated to be facilitating a level of recovery. Reduced fishing pressure, due to lower demands for seafood and the lack of trade markets and channels, is believed to have the potential to allow some fish stocks the conditions needed to recover. Pertaining to any positive impacts on the environment, there is a level of caution as the rebound period generally tends to be quite detrimental, quickly reaching and in some cases exceeding pre-crisis levels.

One of the negative environmental impacts of COVID-19 is that of growing plastic pollution. Improper disposal by the public of personal protective equipment (such as disposable masks, gloves and hand sanitizer bottles) is contributing to already present issue of plastic pollution. UNCTAD reports that historical data suggests that about 75% of coronavirus plastic will likely become waste, clogging landfills and floating in our seas. This can lead to bioaccumulation of toxins released during the degradation of plastics. Figure 26 highlights some of the photos taken which are showcasing the negative interactions between personal protective equipment and nature.

¹⁸ The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.



(Boyle, 2020; Ashworth, 2020; Edmond, 2020; Harris, 2020; Kassam, 2020).

Figure 26 Environmental threats posed improperly disposed face mask (source Selvaranjan 2021)

Another negative impact on the environment is that of increased overexploitation and illegal activities. With declining access to any income and the lack of social protection, vulnerable groups (such as indigenous communities) may turn to the over-exploitation of natural resources, either for their own consumption or to generate income. The absence of human presence due to the lockdown measures and business closures increases the risk of illegal activities such as illegal, unreported and unregulated (IUU) fishing, deforestation, illegal mining and wildlife poaching as well as polluting activities.

Data collection and monitoring of various environmental parameters has also ceased. Progress towards international, regional, national and site level goals and targets are not being tracked. This can lead to a proliferation of non-evidence based decisions being made which can prove to be harmful to the environment in the medium- or long-term.

See infographic (Figure 27) for COVID-19 impacts on the ocean.

Marine protected and conserved areas

When it comes to protected and conserved areas, the lack of tourism presents a double-edged sword since tourism generates revenues which are used for conservation (to pay protected area staff such as patrol officers and rangers). It is estimated that 7% of world tourism relates to wildlife tourism, a segment which is growing annually at about 3% (UN 2020b). Tourism also provides an opportunity for those living in and around protected and conserved areas to generate an income. With the lack of enforcement and patrols, activities such as sea turtle poaching and the illegal occupation of land.

More specific COVID-19 related challenges for MPAs include:

- unemployment
- project activities ceased
- revenue loss (due to reduced visitors and budget cuts by governments)
- lack of data collection, monitoring and enforcement
- increased vulnerability of PAs
- significant slowing in the pace of business (collaboration between agencies)

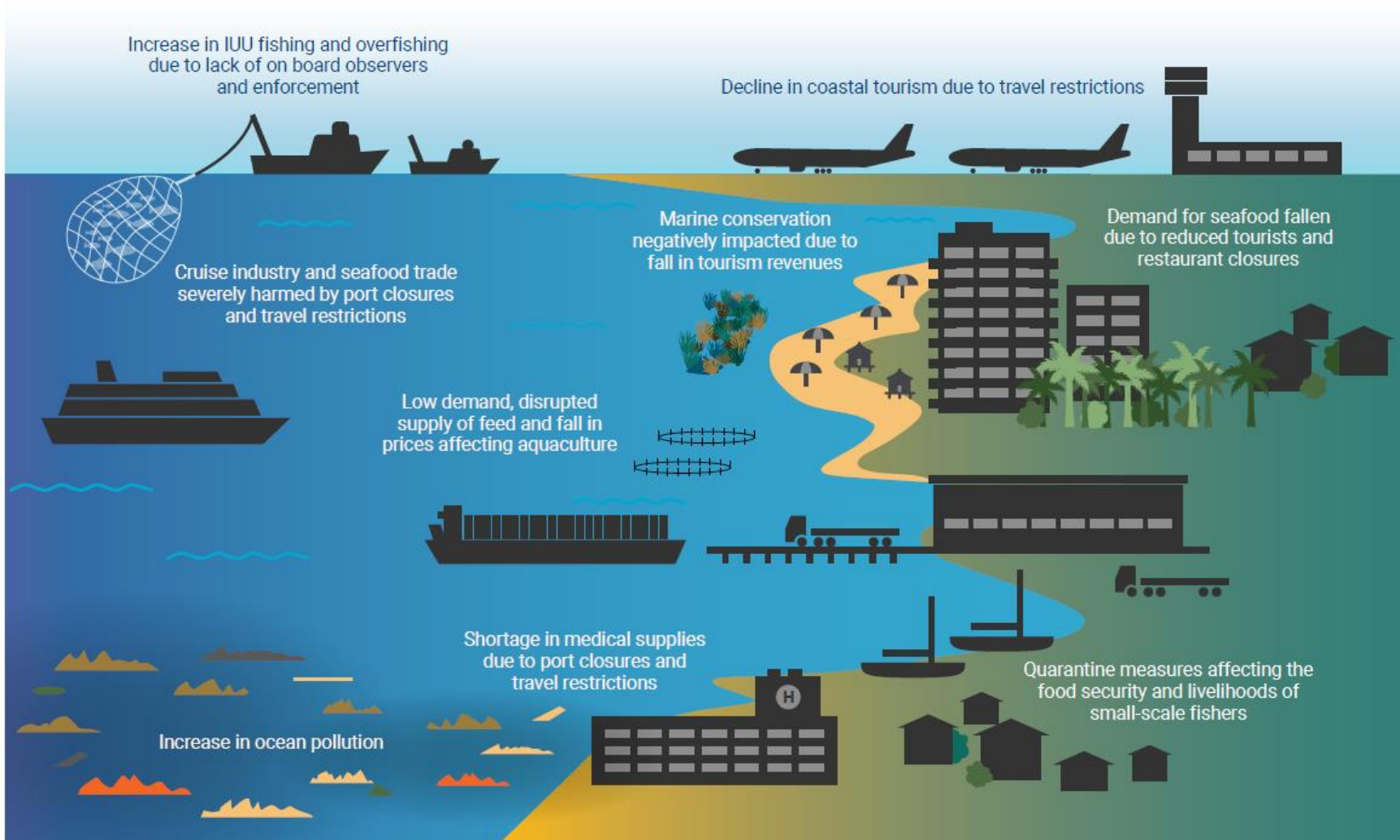


Figure 27 Interwoven impacts of COVID-19 across the ocean (source Northrop et al. 2020)

- increase of illegal activities (poaching, illegal fishing)
- rolling back of legal protection of MPAs
- Reports of increased poaching and illegal clearing of wetlands

CHAPTER 4



Pitons, Saint Lucia

IMPLICATIONS FOR THE ACHIEVEMENT OF KEY MULTILATERAL ENVIRONMENTAL AGREEMENTS

(PERTAINING TO THE MARINE ENVIRONMENT)

With disproportionately larger marine spaces (exclusive economic zones) compared to terrestrial spaces, the marine environment is extremely important to SIDS. The ocean economy, defined as the sum of the economic activities of ocean-based industries, together with the assets, goods and services provided by marine ecosystems, can therefore be a significant contributor to national and regional economies. Marine spaces therefore need to be conserved and managed sustainably to allow for sustained benefits for present and future generations. Multilateral Environmental Agreements (MEAs) provide a road map, inclusive of goals and targets to track and monitor progress, towards sustainable development. MEAs also help to identify priority actions to focus on in order to work towards sustainable development regarding oceans and seas.

Key MEAs include:

- the Sustainable Development Goals (2015-2030) (Figure 28)
- the Aichi Biodiversity Targets (2011-2021) – set to be replaced with the Post-2020 Global Biodiversity Framework (Figure 29)
- the Small Island Developing States Accelerated Modalities of Action Pathway (SAMOA Pathway)
- an international legally binding instrument under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ)

The achievement of MEAs requires implementation of actions and activities which require:

- financing – needed to pay personnel, purchase equipment, facilitate data collection and monitoring etc.
- partnerships and cooperation – across public and private sectors, at international, regional and national levels
- dialogue and exchange of information – for example through conferences, meetings and workshops
- data – accurate, up-to-date pertinent data to allow for monitoring and tracking of progress towards goals and targets
- innovation – development of new technologies and/or adaptation of existing ones to tackle new challenges and problems



SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution *(Related Aichi Biodiversity Target: 8)*

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information *(Related Aichi Biodiversity Target: 11)*

14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism *(Related Aichi Biodiversity Target: 6)*

14.A Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries *(Related Aichi Biodiversity Target: 19)*

14.C Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want

Figure 28 SDG targets pertaining to Goal 14









 <p>Aichi Target 3: Subsidies and incentives</p> <p>By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.</p>	 <p>Aichi Target 11: Protected areas</p> <p>By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.</p>
 <p>Aichi Target 6: Fisheries</p> <p>By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.</p>	 <p>Aichi Target 17: NBSAPs</p> <p>By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.</p>
 <p>Aichi Target 8: Pollution</p> <p>By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.</p>	 <p>Aichi Target 18: Traditional knowledge</p> <p>By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.</p>
 <p>Aichi Target 10: Vulnerable ecosystems</p> <p>By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.</p>	 <p>Aichi Target 19: Knowledge, science and technology</p> <p>By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>

Figure 29 Aichi Biodiversity Targets pertaining to the ocean

- on-the-ground actions – regardless of how many policies, goals and targets exist, without on-the-ground actions there will be no change

The COVID-19 pandemic has created serious implications for the achievement of SDG 14, the ocean related Aichi Biodiversity Targets and other related MEAs. The full extent of the implications will be influenced by the duration of the pandemic and the overall impact it has on the economic, social and environmental components of society. Key implications are:

- The postponement of major decision making fora and the lingering uncertainty as the pandemic wages on has limited a lot of key dialogues, negotiations and exchange of information necessary to drive the achievement of MEAs. Major postponements include:
 - the 2020 UN Ocean Conference, aimed at propelling much needed science-based innovative solutions and starting a new chapter of global ocean action
 - the 15th Conference of the Parties (COP) of the United Nations Convention on Biological Diversity (CBD), the forum to decide upon the Post-2020 Global Biodiversity Framework
 - the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction
 - the 26th COP of the UN Framework Convention on Climate Change (UNFCCC)
- The reduction of critical financing to conduct necessary implementing tasks and actions. As priority shifted towards the containment of the virus and the need for personal protective equipment, medical equipment (such as ventilator) and vaccines, funds previously allocated to the environment was shifted elsewhere. The reduction in tourism generated funding, which is often used to drive conservation efforts through the payment of protected area staff (such as ranger and patrol officers) has exposed species and ecosystems to reduced levels of protection.

- The reversal of hard-earned progress made towards achievement of MEAs. The pandemic has significantly erased progress made regarding the elimination of poverty, gender inequality and gender-based violence. These represent some of the immediately noticeable reversal, however, many other regressions may only become apparent in the medium- to long-term. The potential for a rebound effect, for example the hasty depletion of increased fish stocks, is also cause for concern regarding the potential for declines from pre-COVID-19 conditions. The economic crisis has led to overexploitation of resources and increased illegal activities such as wildlife poaching and polluting activities. The nature of the pandemic has led to an increase in medical wastes which has the potential to pollute environments such as our seas and oceans.
- A lack of research, data collection and monitoring which are all crucial to better decision making and policy formulation. The lockdown measures have taken conservationist, researchers and practitioners out of the field and put a halt to collection of data and various monitoring efforts. The environment is ever changing and thus requires constant research, data collection and monitoring for incorporation into decision making processes to allow for evidence-based decisions to be made.
- Reduced partnerships and cooperation, which are the backbone of any implementation strategy. With reduced business operations and economic activities, many organisations are no longer able to focus on/execute tasks and actions outlined under various partnerships and arrangements. Even after the end of the pandemic, the time taken to re-establish partnerships and cooperation may be lengthy and, in some cases, may never be re-established at all.
- Loss of human capital. The achievement of any MEA requires persons and the knowledge, skills and technical expertise they possess. The staggering number of lives lost to the Corona virus, has significantly reduced the human capital globally and within SIDS. Among these are indigenous people taking with them their traditional knowledge.

Table 11 provides potential implications of COVID-19 on the key identified MEAs.

Table 11 COVID-19 implications on the achievement of key MEAs

2030 Agenda for Sustainable Development (SDG 14)	
14.1 (Aichi Target 8)	The likelihood of achieving this target by 2025 will be significantly reduced with increasing duration of the pandemic. The nature of the pandemic lend itself to the production of medical wastes with a high likelihood of making its way into the marine environment.
14.5 (Aichi Target 11)	The time limit for this target has passed with many SIDS not achieving the set target (see Appendix 1). The lack of research and scientific data being collected, reduced conservation funding and the postponement of key negotiations such as the BBNJ potentially reduces achievement of this target in the near future.
14.7 (Aichi Target 6)	The achievement of this target has been significantly derailed with the potential increase in unsustainable use of the marine environment and further depletion of fish stocks. With tourism at a standstill, progress towards sustainable tourism models has also slowed.
14.A (Aichi Target 19)	COVID-19 has hindered increases in scientific knowledge and the development of research capacity and potentially the transfer of marine technologies ¹⁹ (in particular physical equipment). The duration of the pandemic will be a determinant in the time frame for the achievement of this target.
14.C	The postponement of various decision and negotiation fora, in particular the negotiations associated with the BBNJ, has slowed the achievement of this target.
Aichi Biodiversity Targets	

¹⁹ Information and data; manuals, guidelines, criteria, standards, reference materials; sampling and methodology equipment; observation facilities and equipment; equipment for in situ and laboratory observations, analysis and experimentation; computer and computer software; expertise, knowledge, skills, technical/scientific/legal know-how and analytical methods related to marine scientific research and observation.

Target 3	The current national socioeconomic conditions and the potential for decisions made in response to COVID-19 to go against this target has serious implications for its achievement event after the set date of 2020.
Target 10	COVID-19 stands to add additional stressors to these ecosystems such as increased plastic pollution, unsustainable practices (overexploitation and illegal activities) and the impact of a possible rebound effect, thus impairing achievement of this target.
Target 17	For countries yet to achieve this, COVID-19 has shifted attention to the development of policies geared towards the on-going pandemic.
Target 18	COVID-19 presents the potential for vulnerable groups such as indigenous people to be further marginalised rather than included. The vulnerability of indigenous people due to a lack of social protection such as medical insurance and also due to declines in food quality, could mean a significant loss of traditional knowledge.
SAMOA Pathway	
Sustainable economic growth	COVID-19 has caused an unprecedented economic recession and thus has severely reversed progress towards sustainable economic growth.
Climate change adaptation and mitigation	COVID-19 has potentially slowed climate change adaptation and mitigation efforts with lack of on-the-ground activities such as research and data collection.
Biodiversity protection	COVID-19 has had negative impacts on biodiversity protection with a significant decline in conservation workers (rangers, patrol officers etc.) which has led to increased unsustainable activities and wildlife poaching.
Improving human health and social development	This is probably the most impacted priority action of the SAMOA pathway. COVID-19 has altered human health,

	exposed the vulnerabilities of the elderly and those with NCDs and has ruptured the social fabric of our society.
Partnerships among SIDS	The primary focus for SIDS has been arresting the spread of the virus and protecting lives. This has led to new and continued partnerships between and among SIDS. For example the negotiation for and sharing of vaccinations among Caribbean SIDS. However, a number of challenges have been highlighted regarding multistakeholder partnerships (see Figure 30).
Post-2020 Global Biodiversity Framework	
Engagement in input opportunities	Due to the lack of data it difficult to indicate how COVID-19 has impacted this.
UNCLOS Biodiversity in Areas Beyond National Jurisdiction	
Participation in the intersessional work programme	Due to the lack of data it difficult to indicate how COVID-19 has impacted this. However, perhaps with the moving of the engagement activities to a virtual format, it would have allowed for greater participation.

The COVID-19 pandemic has allowed the world to stop and take note of where we are with regards to the conservation and management of the environment, biodiversity and our natural resources and progress towards achieving sustainable development. Before COVID-19 biodiversity was declining at alarming rates, despite the various existing MEAs, call to actions, policies, strategies etc. Although COVID-19 has presented serious implications for the short-term achievement sustainable development, it may have provided the opportunity for achievement in the medium or longer term as we move away from business as normal and seek to rebuild better.

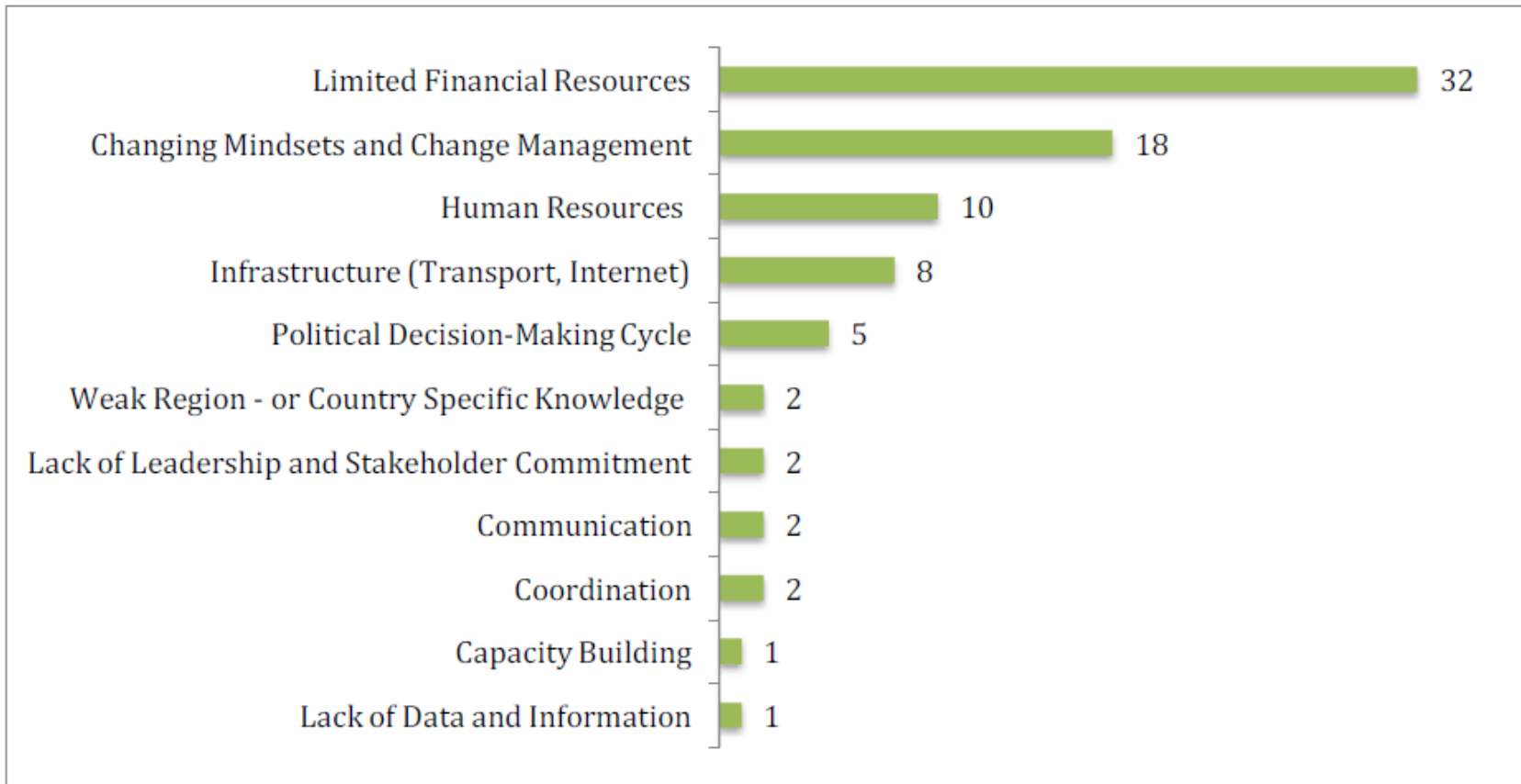


Figure 30 Identified challenges faced regarding multi-stakeholder partnerships (source UNDESA 2016)

CHAPTER 5



Montserrat

IMPACTS ON THE IMPLEMENTATION OF KEY PROJECTS

In the heirachial scheme of things, MEAs identify priority actions and goals which are broken down into distinct targets. Work towards the meeting of tragets are usually achieved through partnerships which are realised in projects. Projects are the cornerstone of MEA implementation, allowing for the critical on-the-ground work that needs to be undertaken. Projects allow for the building of networks and capacities, the exchange and sharing of technologies, knowledge and information, the collection of data and monitoring of systems and provides a conduit evidence-based decision making and policy formulation.

This chapter highlights the impacts on COVID-19 on the implementation of two key projects within Caribbean SIDS, the Integrating Water, Land and Ecosystem Management in Small Island Developing States (IWeco²⁰) project and the CREW+: An Integrated Approach to Water and Wastewater Management Using Innovative Solutions and Promoting Financing Mechanisms in the Wider Caribbean Region project²¹.

5.1 IWeco project

5.1.1 About

The project is a five-year, regional project that builds upon the work of previous initiatives, to address water, land and biodiversity resource management as well as climate change. The project runs from 2016-2023 and involves 10 participating SIDS, which include Antigua and Barbuda, Barbados, Cuba, the Dominican Republic, Grenada, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Trinidad & Tobago.

The primary objective of the project is to contribute to the preservation of Caribbean ecosystems that are of global significance (fresh and coastal water resources, land resources and forests) and to the sustainability of livelihoods.

The project is funded by the Global Environment Facility (GEF) and UN Environment (UNEP) is the lead Implementing Agency for national and regional sub-projects. The UN Development

²⁰ <https://www.iweco.org/>

²¹ <https://www.thegef.org/project/crew-integrated-approach-water-and-wastewater-management-using-innovative-solutions-and>

Programme also implements some activities aimed at supporting community-based livelihood opportunities through the GEF-Small Grants Programme.

The project consists of six components (Figure 31) which contributes to the achievement of SDGs 6, 13, 14 and 15.

5.1.2 COVID-19 impacts

The COVID-19 pandemic was indicated to be having a negative impact on the IWECO project. It was reported that COVID-19 impacts can affect the ability to comply with obligations made under the various Global and Regional MEAs due to less capacity available in countries to deal with environmental issues, including reporting. The specific impacts on the IWECO project included:

- project implementation
 - delays in execution
 - disruptions in scheduling

- project logistics
 - field activities impacted due to government-imposed restrictions on size limits and time of operation (curfews)
 - lack of access to required technologies for trainings
 - lack of access to non-local expertise due to travel restrictions
 - difficulty conducting in-person stakeholder engagement, capacity building, training/education

- project financing
 - financial impact due to project extension

- technical capacity
 - difficulty converting in-person training material to online/digital versions

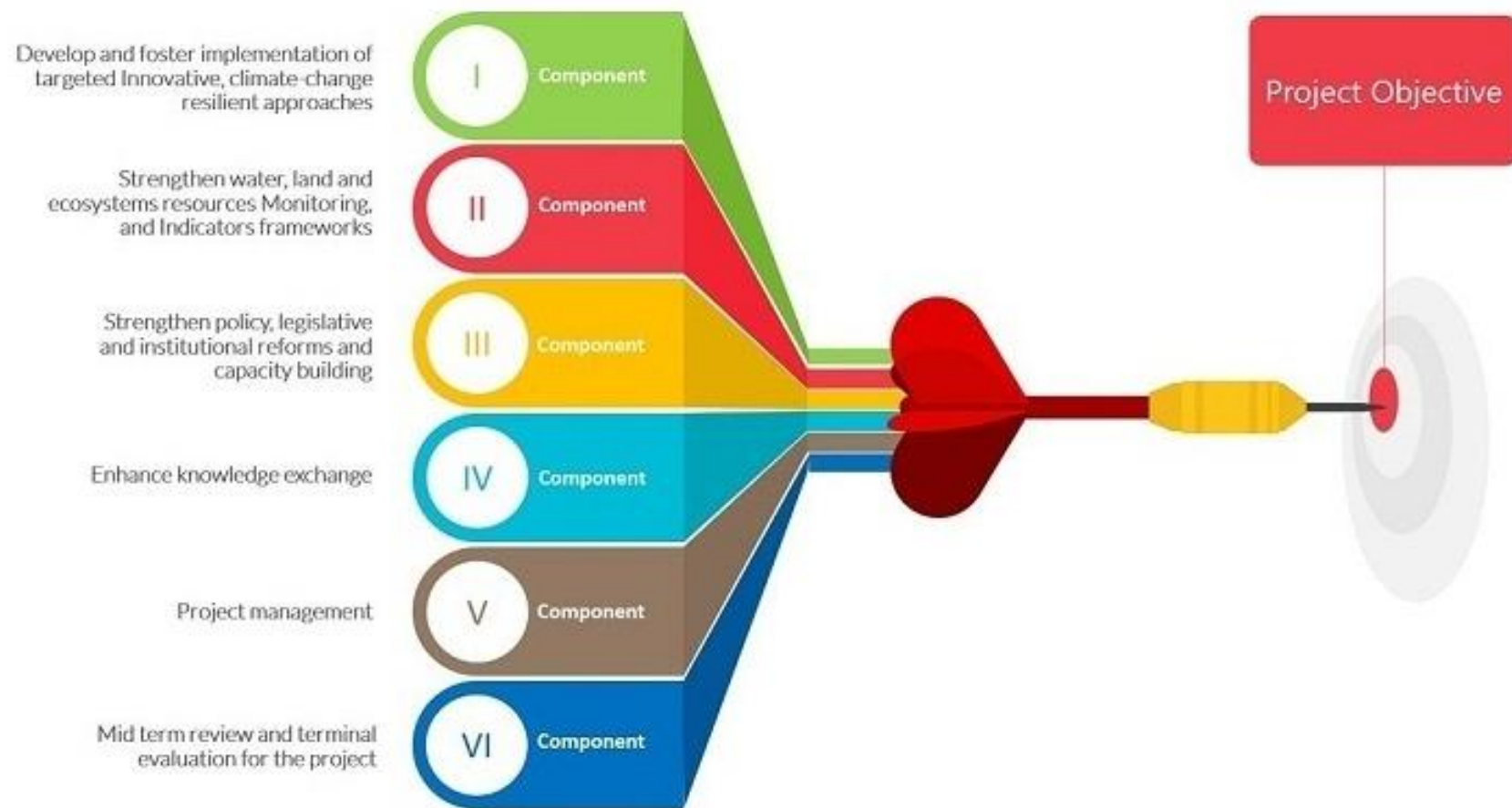


Figure 31 Components of the IWeco project

- Government support
 - lack of government focus on the project due to a focus on responding and adapting to COVID-19

5.1.3 Recommendations

The various subgroups of the IWeco project are utilising the following to combat impacts:

- shifting engagement to virtual mechanisms (e.g. webinars)
- utilisation of small focus groups
- increased use of social media platforms to inform of activities and to interact with partners and supporters (maintain engagement)
- utilising local expertise where possible
- seek formal permission for field visits
- creation of “generic communications material that can be tailored to local situations and used to augment activities being executed and educational material being disseminated”
- adjust project deliverables and reallocate funds without compromising the projects objectives

Source UNEP 2020

5.2 CREW+ project

5.2.1 About

The project is a regional project, encapsulating the Wider Caribbean Region, which build upon its previous phase "The Caribbean Regional Fund for Wastewater Management (CREW)" project (2011 2016).

The primary objective of the project is to o implement innovative technical small-scale solutions for Wastewater Management in the Wider Caribbean Region using an integrated water and wastewater management approach and through building on sustainable financing mechanisms piloted.through the Caribbean Regional Fund for Wastewater Management.

The project is funded by the Global Environment Facility Trust Fund and implemented by the Inter-American Development Bank and executed by UNEP CAR/RCU and National Pilot Executing Agencies.

The project contributes to the achievement of SDGs 6, 11, 14 and 15.

5.2.2 COVID-19 impacts

The COVID-19 pandemic was indicated to be having both positive and negative impact on the CREW+ project. It was reported that COVID-19 impacts can affect the ability to comply with obligations made under the various Global and Regional MEAs due to delays in the activities to achieve the requirements. The positive impacts include:

- highlighting the social gaps and structural deficiencies that water and sanitation utilities face
- creating awareness of this problem within Governments
- providing an opportunity to implement innovative solutions to achieve universal access and increase efficiency

The negative impact included

- project implementation
 - delays in execution, especially in the essential sector of the water and sanitation

5.2.3 Recommendations

The following was suggested to combat impacts:

- provision of technologies to governments and the national stakeholder a better equipment and systems to work remotely

It was reported that the implementation of the project could be improved with more projects that take action on the ground and with the involvement of donors and agencies such a development banks.

5.3 Summary

Using these two projects as a guide, it is evident that COVID-19 is indeed having an impact on the implementation of projects. For the most part, those impacts tend to be negative as they affect the timeliness of projects due primarily to various restrictions imposed by governments (such as lockdowns, reduced numbers for in-person gatherings and curfews). These restrictions can affect key components of projects such as field visits for data collection and monitoring and in-persons event such as meeting, workshops and trainings. The extending of project timelines can, in some cases, lead to the need for additional financial resources.

To combat the in-persons limits or lack of in-persons gatherings altogether, a shift from face-to-face to virtual was made. This in some cases can lead to further project delays when the required digital technologies are not readily available or the technical capacity to use the digital technologies is absent. In addition, purchases may be required for some digital technologies, adding unbudgeted costs. The lack of travel can also limit access to experts, which can be particularly significant if field visits are required or there is a need for transfer of knowledge/capacity in a more practical way.

The focus of governments on the pandemic and its health component, may cause projects to get neglected (depending on the source of funding) or to not be fully incorporated into the country's efforts to achieve established targets and goals.

Considering the multitude of projects which are currently being undertaken within Caribbean SIDS, these project impacts can have serious multiplier effects which significantly hinder the cumulative efforts required to achieve targets and goals. In some instances, projects may be dependent on other projects for its own implementation, thus compounding the impacts.

Encouraging are the workarounds being employed to overcome the impacts where feasible. The projects highlight the need for greater capacity to be built regarding digital technologies and technical capacities within countries. Another positive stemming from the impacts of COVID-19 on projects is the highlighting of gaps and vulnerabilities which may have gone unnoticed or unknown before.

CHAPTER 6



Caroni Swamp, Trinidad

MITIGATION ACTIONS TO ENHANCE RESILIENCE FOLLOWING THE SHOCKS PRECIPITATED BY THE COVID-19 PANDEMIC

The ability to respond to and recover from this unprecedented crisis will vary significantly from country to country. This could be due to differences in infrastructure, human resources, economic capacity or political factors. Regardless of ability level, sustainable development should be at the heart of all recovery efforts.

A key point of note is the fact that we should not be aiming to return to normal, but to build back better. This should not simply be aimed at the short-term (the here and now) but also be focused on the medium- and long-terms as well. The slogan ‘building back better’ emphasises the need for change, the reforming of policies and the recognition of the ways in which inequalities have made certain groups in society vulnerable to the impacts of the crisis. There is a definite need to rebuild in a manner which increases resilience, reduces inequalities, promotes inclusivity and places women and girls at the centre of economies. In so doing, there will be a better chance of supporting a more rapid recovery and getting back on track to achieve the Sustainable Development Goals.

We must be strategic in our mitigation efforts and avoid any decisions or efforts which may negatively impact the environment or set us back further than we are now (see Box 6.1). We should also use this as an opportunity to address previous mistakes, vulnerabilities, gaps and inequalities, and set upon a path to build resiliency against future perturbations, achieve the goal of sustainable development and foster a culture of living in harmony with nature.

Potential mitigation actions are highlighted below (in no particular order).

6.1 Capacity enhancement

COVID-19 has clearly highlighted the need for development of societies with robust and diverse skill sets. Such capacities would allow for the development of new products, innovative marketing, market intelligence and digital skills. There needs to be the development of free online training courses, in partnership with universities and other educational and training institutions, to facilitate up-skilling and reskilling. International organizations can support the provision of free online

Box 6.1 Humanitarian effort unfortunately leads to destruction of reefs

- During the early COVID-19 period of 2020, at a time when many other countries were turning them cruise ships away, the Barbados Government welcomed cruise ships to the island and allowed them to anchor along the west and south coasts of the island.
- A total of 28 cruise ships anchored in Barbados during the period of 1 March to 1 September 2020. Many of the ships anchored more than once, which led to 132 anchor drops taking place in relatively shallow water (< 50 m) on sandy areas, hard coral patch reefs and hard coral reef framework.
- This led to extensive damage (millions of square metres) to bank reef coral communities of Barbados along its south and west coasts



Drone image looking northwest from Needham's Point on 9 July 2020 showing multiple cruise ships anchored in Carlisle Bay and two docked in the Bridgetown Port (Photo credit: Joseph Weekes).

Source: Small and Oxenford 2021

content, similar to the UNWTO Online Academy²². A key point of note is the provision of content and training materials in multiple languages to cater to the language diversity of the Cartagena Convention Area.

A special effort must be made to build the capacity of managers and practitioners of protected and conserved areas to ensure they possess a well-developed understanding of laws, policies, and business needs and understand the importance of better data collection and monitoring and the subsequent communicating of results and findings to decision and policymakers.

6.2 Environment mainstreaming

The environment lies at the core of our existence and achievement of sustainable development. Its protection should be of utmost importance and should be at the centre national, regional and global agendas. Environmental considerations should be included in all sectors and in all aspects of planning and development. It should be written into budgets, plans (such as food security plans), policies and integrated into incentives, investment schemes and special funds. These can include resource efficiency (energy and water efficiency, waste management) and measures aimed at reducing CO₂ emissions. The concepts of environmental transparency and accountability should be taught and applied to individuals, households, organisations, entities and to countries.

6.3 Economic support

6.3.1 Debt relief

The declines in exports from tourism, coupled with high food import bills and additional expenditure to purchase medical supplies and equipment minimises the likelihood of any significant reduction in debts. Measures aimed at limiting debt servicing costs of SIDS, through a combination of debt relief, forbearance and debt swaps, would bode well for recovery. Such measures should be expedited and provide total or partial debt forgiveness.

²² <https://www.unwto-tourismacademy.ie.edu/>

6.3.2 Economic recovery packages

Given the high dependence of SIDS on tourism, recovery packages through multilateral development banks and financial institutions can have a positive influence on tourism development, promoting eco-friendly tourism alternatives such as ecotourism, mountain tourism, nature, heritage, cultural and adventure tourism while supporting sustainable tourism infrastructure as well as building longer-term carbon neutrality and resilience tourism economies.

SIDS usually have limited fiscal space, limiting the availability of funds to respond to such external shocks. UNDESA (2020b) reports that the Caribbean have so far announced a stimulus package estimated at around 1%–4% of GDP, which will clearly be insufficient for mitigating the catastrophic impacts of a twin health and economic crisis. A fiscal stimulus as large as 10% or more of country GDP's is suggested to be needed to minimize the cataclysmic impact of the current crisis.

Long-term support to small and medium enterprises, beyond initial relief measures, will be needed for small and medium enterprises to continue operating.

6.3.3 External funding

External funding support, such as monetary stimulus and liquidity facilities provided by large central banks, can help to avert an even deeper economic downturn. The renegotiation of bank loans, especially to severely affected households and businesses, should also be considered. A call has been made for the urgent need to reconsider eligibility for concessional financing to SIDS, where it is based on vulnerability rather than just income criteria. Access to concessional financing normally depends on income (GNI per capita), but most SIDS are much more vulnerable than their income level would suggest.

6.3.4 Investing in nature

Financial support packages for COVID-19 recovery could invest in the green and blue economies. Investing in protected areas, for example, can support jobs and livelihoods in local communities. This addresses future economic risks by contributing to tackling climate change and biodiversity loss; safeguarding natural ecosystem services, such as clean water, crop pollination, pest control,

and more, and reducing the risk of new zoonotic diseases emerging with the potential to become pandemics.

6.3.5 Social protection systems

The vulnerability of informal workers, women and indigenous people, in part due to the lack of any social protection systems, has been severely exposed as an area needing immediate attention. Basic social protection needs to be extended the most vulnerable in society via the development of special support schemes such as exemptions, delays or reduced social security and fiscal payments. Programs such as Cash transfer programs, which can incorporate actions to preserve the natural resource base on which the population depends, can also be implemented to help generate incomes.

The unpaid care economy, which is primarily made up of women, should be integrated in the national accounts where the value of unpaid domestic work is recognised, quantified and integrated into national accounts systems. Measures such as low or no interest loans or cash grants could allow for survival for 2-3 months without salaries.

Job retention should be incentivized through the provision of special incentives and relief funds for companies that retain their workforce, including the exemption or reduction of social security and fiscal payments.

6.3.6 Targeted small grants

Highly specific and targeted grants can be utilised to provide relief in specific areas. Such grants could facilitate immediate on-the-ground activities to cope with/build resilience external and unexpected shocks. The Biodiversity and Protected Areas Management (BIOPAMA) programme provides a good example of this with their rapid response grants (see Box 6.2).

Box 6.2 BIOPAMA Rapid Response Grants

- In 2020, the Biodiversity and Protected Areas Management (BIOPAMA) programme launched a grant aimed at increasing the resilience of protected areas and local communities' livelihoods facing the risks and difficulties of the global COVID-19 pandemic
- Grants had a maximum amount of ≤ EUR 50 000 with no co-financing required and a maximum duration of 12 months.
- For more information visit <https://action.biopama.org/projects/>



6.4 Transitioning to new models

6.4.1 *Tourism*

There is a distinct need to transition to a more sustainable tourism model based on social inclusion and the restoration and protection of the environment (balancing the needs of people, planet and prosperity). The tourism product needs to be diversified and simply not depend on a single pillar economy. Nature-based tourism (e.g. bird- and whale watching, hiking), cultural tourism and sports tourism are a few examples. Investments are therefore needed in these other models, for example, nature-based solutions for sustainable tourism could allow for the combination of natural processes and ecology with engineering in order to achieve societal goals. In the short-term, as measures loosen, there can be the promotion of domestic tourism to start rebuilding national economies (offering competitive prices and special promotions).

Cultural tourism has been identified as a potential catalyst for sustainable development. It can help foster the appreciation of the diversity of cultural heritage, stimulate local heritage, promote territorial cohesion and socioeconomic inclusion for the most vulnerable populations, and in many rural areas, sustain livelihoods through social and economic development, including for women.

Tourism operations need to transform towards climate-aware tourism development which includes monitoring and reporting CO₂ emissions for tourism operations as well as the introduction of science-based targets to effectively contribute to the implementation of Nationally Determined Contributions to the Paris Agreement.

The value of conservation through tourism is an area that has potential for investigation. Examples could include where the conservation of marine and terrestrial ecosystems, protected areas and species largely depends on tourism revenue and operators; the role of tourism to sustain conservation and fight illegal wildlife trade; and the contribution of tourism to the preservation of cultural and historical sites.

6.4.2 *Circular economy*

The circular economy aims at minimising waste, by keeping products and materials in use, and regenerating natural systems. It provides opportunities for economic growth that also restore the

environment, create jobs, and benefit society. Such opportunities include reducing and reusing (user to user), repairing, refurbishing and remanufacturing (user to business) and recycling and repurposing (business to business). Figure 32 provides some examples of opportunities within a circular economy.

6.4.3 Blue economy

Recognising the vital role that the ocean, and sustainable ocean industries, can play in supporting the transition towards a more sustainable, inclusive and resilient global economy is very important. For SIDS, oceans and seas constitute a much larger geographic area than their inland territory, especially when the EEZ is taken into account. Renewable marine energy such as tides and waves, wind turbines located in offshore areas, submarine geothermal resources and marine biomass could be viable alternatives for contributing to energy needs and climate change mitigation objectives. The ocean also provides opportunities for marine bioprospecting since living marine resources have huge potentials for utilisation as new foods, biochemicals, pharmaceuticals, cosmetics and bioenergy applications. Figure 33 highlights priority areas for recover from the current crisis.

6.4.4 Improved food systems

COVID-19 has highlighted the result of poor diets (high prevalence of NCDs) and potential food insecurity due to the high level of food imports. There is a need to bolster food security throughout SIDS by having buffer food stocks, increasing supply of grains, meat, dairy and other critical food items to prevent food price inflation and reduce the likelihood of rising poverty and hunger.

More nutrition sensitive investment and policy actions are needed, along food supply chains, to reduce food losses and enhance efficiencies at all stages. Nutrition-sensitive social protection policies will also be central for them to increase the purchasing power and affordability of healthy diets of the most vulnerable populations.

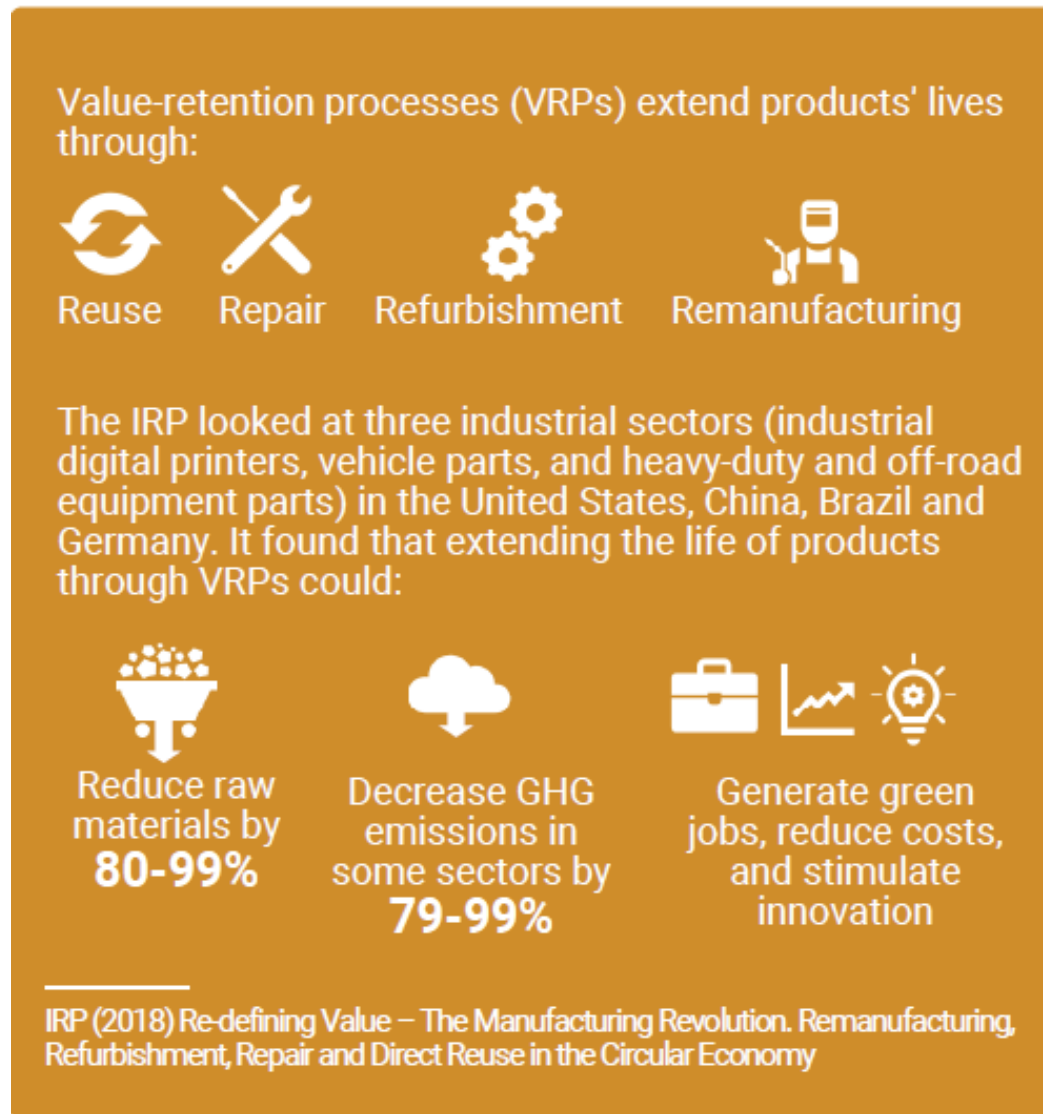


Figure 32 Example of opportunities in the circular economy (remanufacturing) (source IRP 2020)

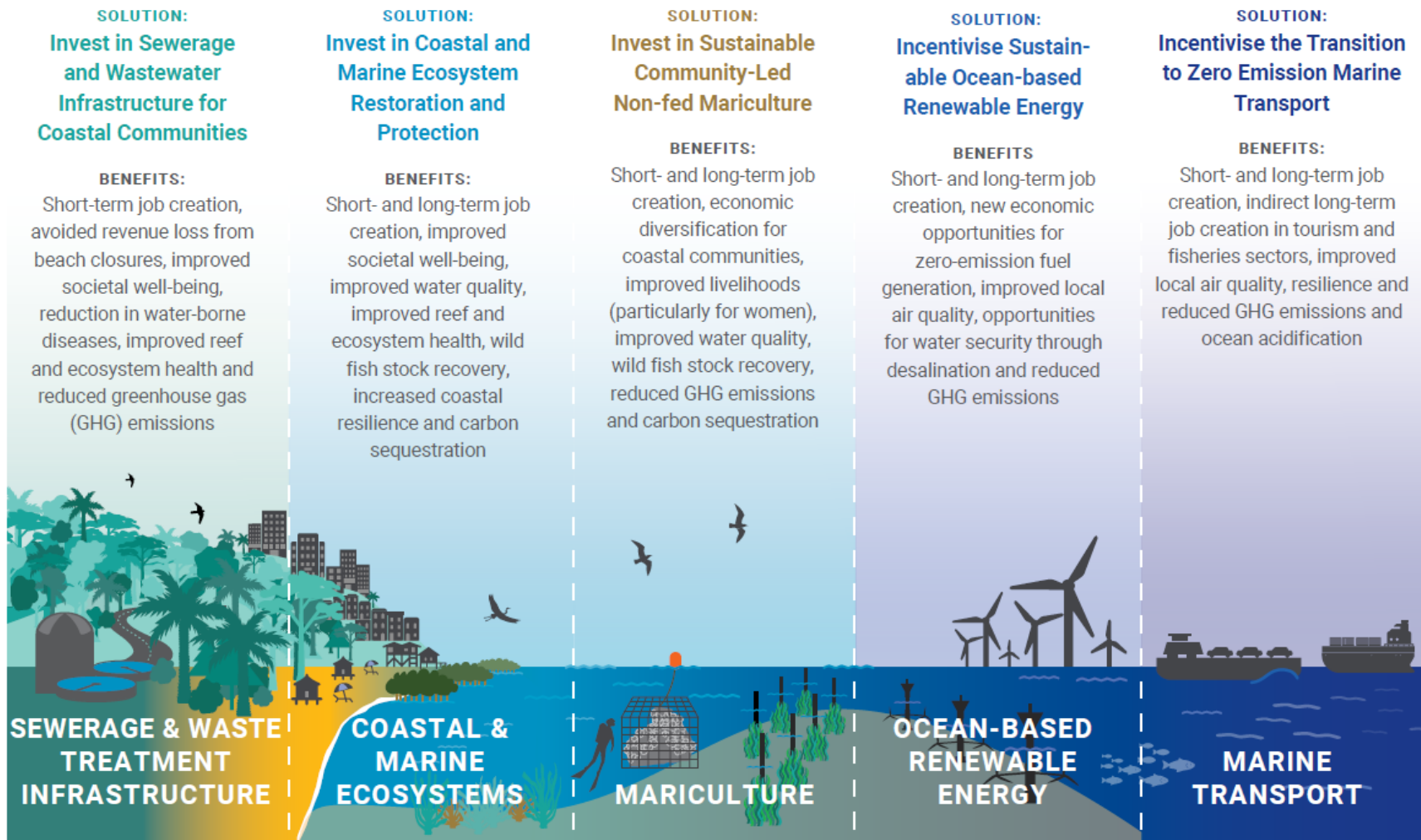


Figure 33 Five priorities for ensuring a sustainable and equitable blue recovery to the COVID-19 crisis (source Northrop et al. 2020)

Investing in new farming technologies (e.g. drip irrigation, ‘low till and precision agriculture’) and resilient varieties can increase productivity and lower water use. The collecting and composting of food residues and recycling nutrients as production inputs can reduce waste.

With such a high level of dependency on food imports, there is an urgent need for improved local food production by improving access to land, providing large food silos and cold storage facilities, maintaining seed banks, better marketing of local foods, challenging social preferences for imported foods, re-kindling knowledge and skills in the preparation of local foods, supporting local family-based production and through backyard gardening projects. Applied research to guide and evaluate the upscaling of local food production, consumption and food security in SIDS should also be undertaken. Leveraging existing public expenditure on the community feeding programs operating in schools, hospitals, prisons, day-cares, nursing homes and other public institutions may offer an opportunity to increase the resilience and nutrition sensitivity of local food production systems. See Box 6.3 for an initiative piloted in Caribbean SIDS.

Figure 34 highlights some of the existing issues with current food systems.

6.4.5 Digital economy (innovative digital services)

The COVID-19 crisis has brought new needs for digital government services and more demand on existing services. Developers were mobilized and engaged in designing new apps and services to help in the fight against COVID-19. Artificial Intelligence-powered technology has proven to be beneficial for the provision of health care services when emergency lines outpaced capacity. Patients utilised telemedicine to get medical advice. Multilingual chatbots offered solutions in overcoming language barriers, accessing information and communicating with health practitioners. 3D printing technologies were utilised to produce replacement valves for reanimation devices, and protective medical face shields to address the shortage. The digital economy is cutting edge, exciting and provides new possibilities for SIDS. Table 12 provides information of policy responses utilising digital technologies.

Box 6.3 'Farm to fork' school feeding model piloted in the Caribbean SIDS

Stories of change



© Jeff Mayers

A farm to fork approach for nutritious school meals: tackling childhood obesity in the Caribbean

By Leroy Phillip, Denyse Johnston and Isabella Granderson

Key messages

- In St Kitts-Nevis and Trinidad and Tobago, institutions of agriculture, health and education have joined in an integrated, *Farm to Fork* effort to tackle childhood obesity.
- The *Farm to Fork* model is built on three pillars: increased fruit and vegetables in school lunches; procurement from local farmers; and support for increased horticultural production.
- Locally-produced fruit and vegetables supplied up to 90% of children's lunches. Prior to the project, almost no local, fresh produce was used.
- Vegetable and fruit consumption among over 1,000 children significantly increased, approaching international guidelines.
- In St Kitts-Nevis, the government has established a Joint Communications Committee to enhance public awareness of *Farm to Fork* in addressing obesity.

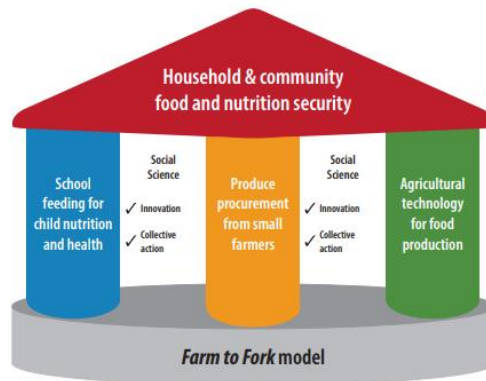


Figure 1: Farm to Fork model



Source: Phillip, Johnston and Granderson 2016



Figure 34 Existing issues with current food systems (source IRP 2020)

Table 12 Digital government policy response to COVID-19 (source UNDESA 2020b)

Time horizon	Policy action	Digital government response
Short-term	React	<p>Use digital platforms (i.e., online portals, social media) for accurate and timely information-sharing</p> <p>Lead two-way communication with people and foster e-participation (i.e., hackathons, brainstorming events)</p> <p>Protect people's privacy and sensitive data and take into consideration unintended consequences of technologies</p>
Mid-term	Resolve	<p>Form effective multi-stakeholder partnerships (i.e., private sector, international organizations, academia) on regional, national and local levels</p> <p>Leverage lessons learned and policy ideas from the ongoing crisis</p>
Long-term	Reinvent	<p>Invest in innovative technologies (i.e., AI, blockchain, robots, drones) to increase resilience of healthcare, the national economy and public services delivery</p> <p>Revisit data protection and privacy legislation along with lessons learned</p> <p>Invest in innovative technologies (i.e., AI, blockchain, robots, drones) to increase resilience of healthcare, the national economy and public services delivery</p>

Source: UN DESA.

6.5 Effective policies

Policies geared towards fiscal, monetary, and financial market measures to support affected households and businesses are necessary for preventing worst case scenarios and aligning with the concept of building back better.

Policies responses that focus on vulnerable groups such as people in the informal markets, small and micro entrepreneurs, women in precarious employment conditions, historically excluded groups, such as indigenous and afro-descendants. It has been suggested that, unless specific measures are implemented to strengthen a gender perspective in the response to the pandemic, by the time it ends, the situation of women will have deteriorated, reversing decades worth of efforts to promote gender equality. Policies which promote greater collaboration with the development agency of the United Nations, the UNDP, which has a wealth of expertise regarding policymaking (in its design, implementation, monitoring and evaluation).

Develop policies that do not support unsustainable activities such as polluting practices, including those that help to fight against plastic pollution in trade, nor that encourages the depletion of any resources exhibiting rebounds or increases. Such actions can quickly reduce resources to pre-COVID levels or even lower. Rather, environmental policy instruments such as Payment for Environmental Services, which can improve the quality of life of the rural population while protecting key resources, is encouraged.

Last, but not least, policies should be evidence based. Grounded in sound scientific and/or local/indigenous knowledge to ensure minimal disruption to the environment while experience maximum gains.

Figure 35 highlights some of the policy measures put in place throughout the Caribbean regarding economic recovery.

6.6 Increased data inclusion

Accurate, pertinent, up-to-date and timely data to support decision making and effective actions are need more now than ever. Such data can be utilised in scenario analysis to help guide

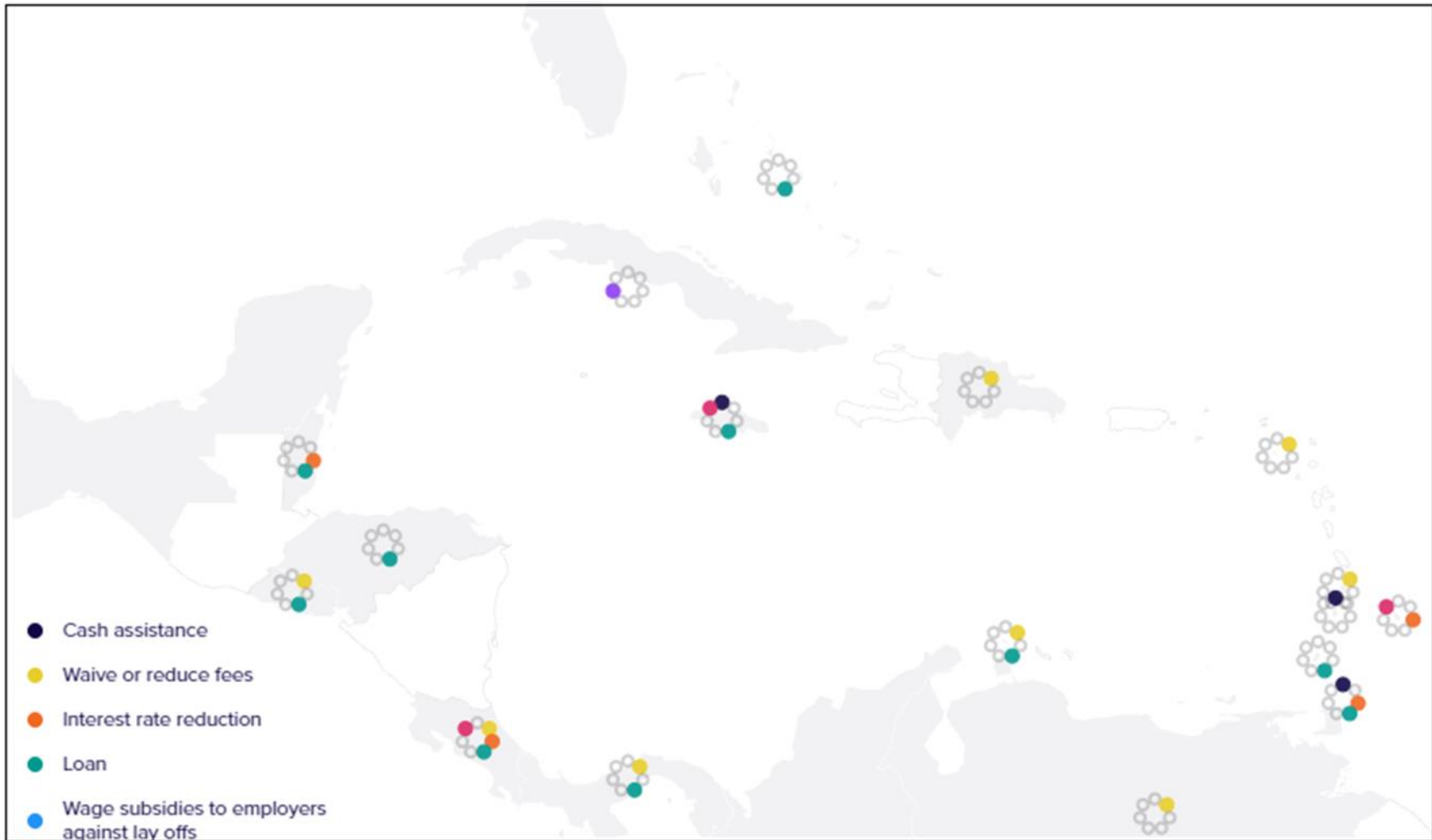


Figure 35 Policy measures put in place for economic recovery (source UNDP’s COVID-19 Data Futures Platform)

recovery policies. This type of analysis can empower governments to turn COVID-19 from a short-term crisis into an opportunity for transformation towards sustainable development in the long term. It can empower policymakers to begin to grasp the complexity of the challenge and be ready with relevant policy responses for alternative futures, identify and take urgent actions to prevent the worst outcomes, and turn the crisis into an opportunity for transformative change in societal and planetary systems towards sustainable development.

Disaggregated data, such as gender-disaggregated data are important to understand the varying levels of impacts within genders groups, thus allowing for the needs of women and girls to be adequately addressed.

Investing in marine technologies (such as data and intelligence systems) can help us more efficiently and effectively observe and understand our oceans. For example, electronic reporting systems that enables fishermen to enter data into apps on computers, tablets or smart phones and then share the info with multiple parties, including management agencies. It has been reported that the future of fishing is big data and artificial intelligence. This includes the use of electronic monitoring via on-board cameras to capture fishing activity which is stored on hard drives and then reviewed by onshore analysts to extract the desired information. At a time develop a better understanding of the close links between anthropogenic activities and impacts on the environment.

Citizen science is an emerging area where non-scientists can participate in scientific advances and discoveries. The general public can actively collect data in situ and contribute to better access to data. The importance of access to data has been realised with prominent academic journals dropping subscription requirements and allowing access to high quality peer-reviewed articles, related to COVID-19, to researchers from across the world, and across disciplines.

The incorporation of data should not only be limited to scientific data but should also include indigenous and local knowledge (e.g. local medicines) to for better outcomes and to bolster inclusion.

6.7 Partnerships

As highlighted previously, partnerships are the backbone of any implementation, strategy or response plans. However, there is need for more innovative partnerships, between the public and private sectors in unique ways (new problems require new solutions). There is a need for more agile approaches and alliances to respond to the dynamic environment in which we live and to cater to unexpected occurrences. Partners should stimulate and promote innovation and technology.

Innovative partnerships may help to bridge the science policy interface with the bringing together of natural scientists with economists and other social scientists who may be able to present differential impacts across different communities and population groups. Policymakers and chief science advisors should be able to tap into a wide range of science and technology advice from both within and outside governments, building partnerships with private technology companies, social entrepreneurs or other national and international organizations.

6.8 All of society approach

An inclusive approach is needed to address the multitude of impacts that have presented in the short-term and will manifest in the medium- and longer-term. To adequately understand how various groups in society were impacted and the requirements for recovery and ultimately increased resilience, all of society should be given the opportunity to be included, at some level, in the ‘build back better’ process. This may range from the identification of impacts, recommendations/solutions and lessons learned to participation into decision making and policy formulation. The approach should thus involve persons from all genders, age groups, education levels, economic classes, societal make up (including indigenous groups) and religions inter alia.

The all of society approach encapsulates changes in individual behaviours as well. Individual actions such as recycling, composting, kitchen gardens, better consumption decisions, greener modes of transportation (walking, riding, carpooling), reusable bags, reduced meat consumption, digital banking and electronic payments and eating more locally produced food inter alia are required to build greater resilience within SIDS.

6.9 Improved communications

Understanding how humans use available information and how they interpret the framework within which options are shown to them will be decisive for the success of programs or policies. There needs to be transparent and proactive communication in support of consumer confidence and public perception.

To tap into wider audiences, support from credible champions and influencers can be solicited. A good example of this is seen with Actress and Activist Maggie Q who partnered with UNDESA/DSDG on SDG14 to advocate to help raise awareness of global implementation of SDG14 and related goals including sustainable consumption and production as well as biodiversity²³. The use of social networks is also a viable medium for raising awareness and the dissemination of information, once it is done from a credible source.

Within communications, there needs to be the promotion of positive gender roles to disrupt gender stereotypes, change traditional narratives, and show that leadership and decision-making, household chores, and caring for and teaching children can and should be shared responsibilities, advancing equality for all (UNICEF 2020).

²³ <https://sdgs.un.org/news/actress-and-activist-maggie-q-partners-undesadsdg-sdg14-advocacy-33004>

CHAPTER 7



Guadeloupe

Major actions and support required for the effective implementation of the Global Biodiversity Framework, Agenda 2030 (SDGs) and other MEAs

Key actions and support for implementation of MEAs include:

- **Legislative framework**

Relevant legislation and policies need to be in place at the national level to provide the framework necessary for the implementation of the various MEAs. Governments therefore need to fully understand the requirements for each MEA to allow for the development of enabling environments (policies, funding, human capacity, materials and equipment, technologies etc.)

- **Financial support**

Sustainable financing mechanisms, such as conservation trust funds, are required for implementation via projects and on-the-ground actions. Funding is needed to execute project activities, including the paying of personnel and the purchasing of equipment, materials and softwares. Oftentimes, project activities grind to halt when project funds end, bringing any further implementation to an end. However, with sustainable financing mechanisms implementation activities can persist.

Funding should be innovative, promoting shifts from harmful subsidies to more sustainable and equitable uses (e.g. ecotourism opportunities for local communities and management and monitoring of marine protected areas). Incentives (taxes and subsidies) should be provided for industry adoption of environment friendly practices. The private sector should be mobilised to investment in hybrid ‘green/blue/grey’ approaches which utilise living coastal infrastructure in traditional construction for coastal infrastructure projects and ports, through financial incentives such as tax exemptions and guarantees.

- **Partnerships**

Cooperation and collaborations are key elements required for the implementation of MEAs. Partnerships should be as inclusive as possible (involving women and indigenous persons where feasible) and operate in an open, transparent and equitable manner. Partnerships should be established in such a manner as to leverage the most from each partner while allowing for the realisation of maximum benefits. The SIDS Partnership

Framework²⁴ provides an excellent resource to monitor progress of existing, and stimulate the launch of new, genuine and durable partnerships for the sustainable development of SIDS.

Management of marine and coastal ecosystems should be wholistic and multi-sectoral. Initiatives such as ecosystem-based management and integrated coastal zone management require cooperation from the relevant sectors, including those on land. Management should also shift from top-down approaches and move toward co-managed or even bottom-up approaches.

- **Capacity engancement**

Various capacities, ranging from technical to technological, are required for the effective implementation of MEAs. Academic institutions such as universities and international organisations have a key role to play, providing content and opportunities for the development of persons involved in the implementation of MEAs. Blue economy skills training and capacity development programs such as ocean-based renewable energy, zero-emission vessels, GIS, ecotourism, restoration can be useful in a newly imagine rebuilt world.

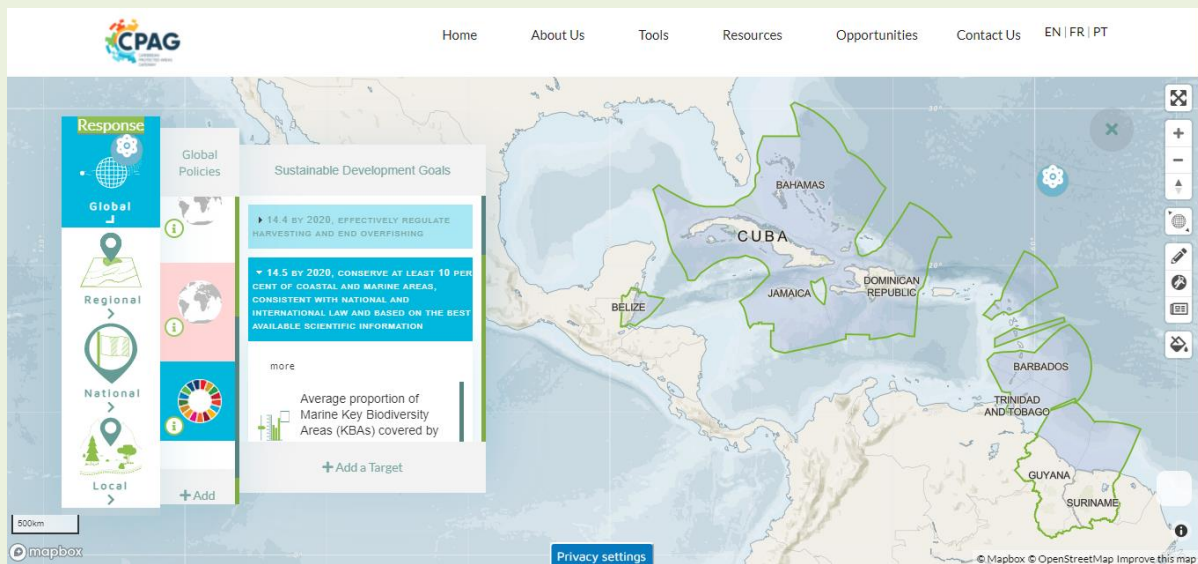
- **Data and information**

Scientific data along with local and indigenous knowledge are required to allow for monitoring and tracking of progress towards outlined targets and goal. Data need to be up-to-date, pertinent, accurate and accessible. Research is therefore a necessity for the collection of data, development of a deeper understanding of systems and to address data gaps. Central repositories and clearing house mechanisms (regional and/or national) can be key for data management. In addition to these, decision support platforms that can add value to data through analyses and visualisations can be key for not technical persons (see Box 7.1).

²⁴ <https://sustainabledevelopment.un.org/sids/partnershipframework>

Box 7.1 Caribbean Protected Areas Gateway

- The Caribbean Protected Areas Gateway (CPAG) is a regional resource and information hub established to improve the conservation and management of protected areas through the provision of up-to-date pertinent data, services (tools and analyses) and capacity enhancement.
- As an example, the platform allows for the tracking of progress towards various MEAs such the SDGs through the visualisation of the underlying data
- The platform provides a geographic information system (GIS), which allow non-technical persons the ability to overlay data and create simple yet meaningful maps for decision making and/or reporting purposes.



Screenshot from the CPAG platform

For more information visit: <https://caribbeanprotectedareasgateway.com/>

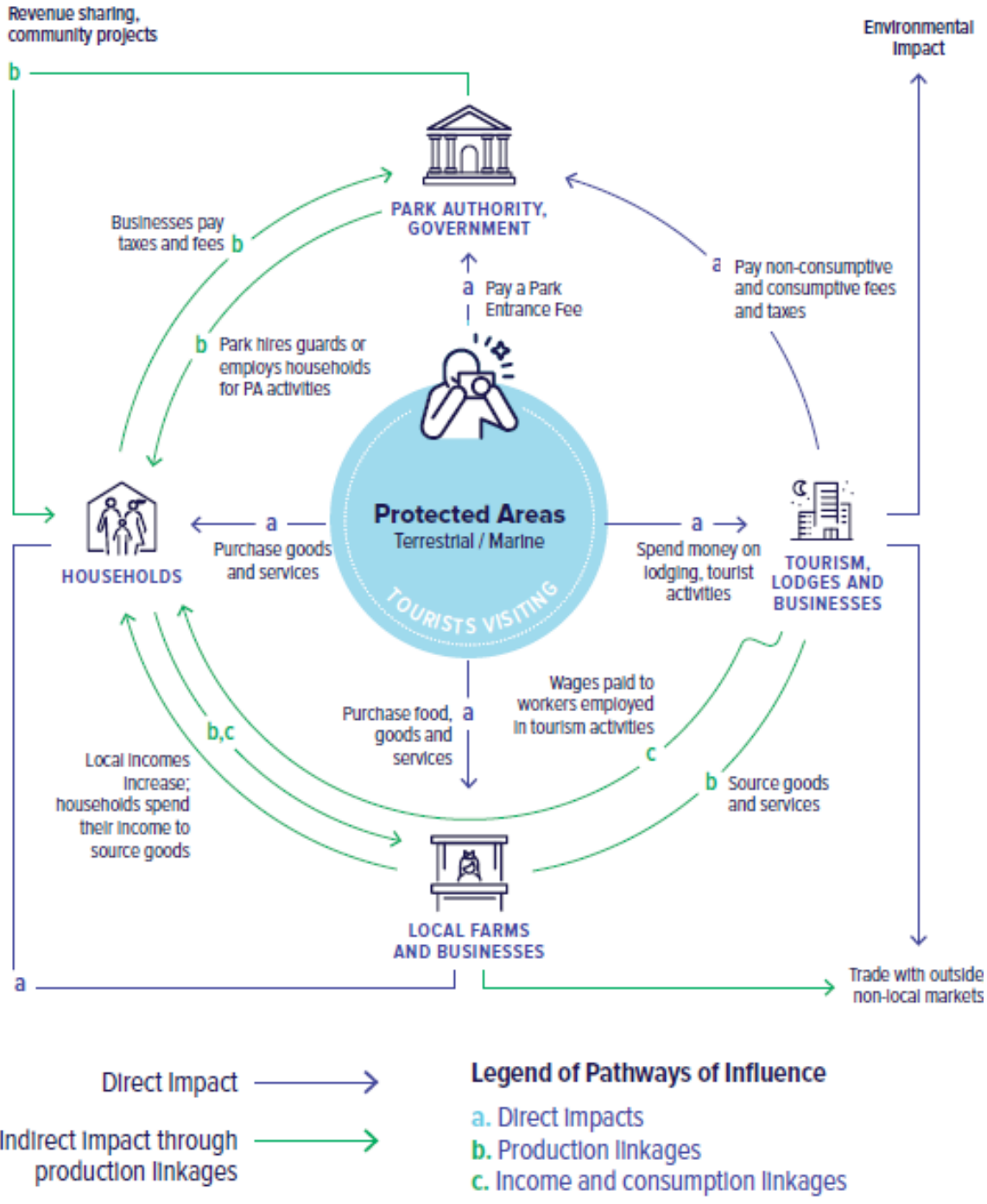
- **Dialogue and communications**

Effective communication of trends and findings, problems, solutions, lessons learned, best practices etc. are required for effective implementation of MEAs. One key area of communication is at the science-policy interface, where science is transferred into the decision and policy formulation environment. Dialogue is also important for the building of networks and partnerships to aid in implementation. Communications should be targeted and focused and disseminated across appropriate media based on target audiences.

- **Area-based conservation**

The protection of the environment lies at the heart of MEAs. Tools such as protected and conserved areas are generally utilised for the conservation of species, habitats and ecosystems. Management of these areas need to be effective to allow for the achievement of objectives and biodiversity outcomes. The potential for these areas to be income generators, through activities such as nature-based and cultural tourism, especially for the surrounding communities highlight their importance. Healthy protected and conserved areas therefore lies at the center of MEA implementation and the achievement of sustainable development.

Figure 36 provides information on the economic pathways for protected areas.



Source: Adapted from Taylor and Filipski 2014.

Figure 36 Economic impact pathways for protected areas (source World Bank 2021)



Dominican Republic

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Pile Bay, Barbados

APPENDICES



Antigua and Barbuda

- **Capital** Saint John's (Antigua) (1707°N, 61051°W)
- **International airport(s)** St. Johns, Antigua
- **Official language(s)** English
- **Currency** Eastern Caribbean Dollar
- **Time** UTC -4
- **Region** Caribbean

Economy

Agriculture, once the mainstay of the economy, has been largely supplanted by tourism. Sugarcane was once the dominant crop on Antigua but is now insignificant. Today, fruit and vegetables, including citrus fruits, mangoes and eggplants are cultivated on the islands. Manufacturing plays a small role in the economy; most activity involves processing agricultural products and making clothing and textiles and concrete blocks. Manufactured exports mainly consist of iron, steel and shipping equipment. Shipping trade has also become important, and the country possesses one of the most important freight hubs in the Caribbean. Services account for almost three quarters of GDP. (UNCTAD, 2021) Tourism and financial services have turned the country into one of the more prosperous in the Caribbean. The contribution of travel and tourism to the economy is significant with over 1 million annual tourist arrivals each year from 2017 to 2019, and the inbound tourism expenditure reaching almost 45 per cent over GDP in 2019 (UNWTO, 2021).

Terrestrial protected area
2018

Marine protected area
2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



440km²

9.1%

19%

289km

107939km²

87km

18.6%

0.18%

GDP per capita
2019

Main economic sectors, 2019
Percentage of GDP

Public debt as % of GDP
2018

Food import dependency
Average 2015-2019

Economic and environmental
vulnerability index
2019



US\$17 113

Services
Industry
Agriculture, hunting, forestry, fishing

89.5%

10.40

32

²⁵ <https://dgff2021.unctad.org/sids-country-profiles/>

Bahamas

- **Capital** Nassau (25° 4'N, 77° 20'W)
- **International airport(s)** Lynden Pindling International Airport, Grand Bahama International Airport, Leonard M. Thompson International Airport
- **Official language(s)** English
- **Currency** Bahamian dollar (BSD)
- **Time** UTC -5
- **Region** Caribbean

Economy

The Bahamas had the 3rd highest per capita GDP in the western hemisphere in 2019, after the United States and Canada ([UNCTAD, 2021](#)). In 2019, over seven million people arrived to the Bahamas by air and sea according to the local authorities. With only 0.8 per cent of arable land, according to FAO, agriculture makes a small contribution to the economy. Manufactured exports often relate to the oceans economy, such as shipping equipment and sea food, but also petroleum. Over 80 per cent of GDP comes from the service sector where four in five persons are employed ([ILO, 2020a](#)), many in tourism and transport. Travel and tourism's contribution to the economy is large. Almost 7.3 million tourists arrived in the country in 2019 and inbound tourism expenditure reached 28 per cent over GDP ([UNWTO, 2021](#)). The islands are also an important centre for business and financial services and banking ([UNCTAD, 2021](#)).

Terrestrial protected area
2018

Marine protected area
2018



Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour

36.6%

7.92%



10 010km²



0.8%



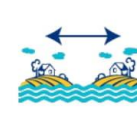
51%



11 238km



628 026km²



562km

GDP per capita
2019

Main economic sectors, 2019
Percentage of GDP

Public debt as % of GDP
2018

Food import dependency
Average 2015-2019

Economic and environmental vulnerability index
2019



US\$34 863



● Services
● Industry
● Agriculture, hunting, forestry, fishing



62.6%



10.06



28

Barbados

- **Capital** Bridgetown (13° 6' N, 59° 37' W)
- **International airport(s)** Grantley Adams Airport, Bridgetown
- **Official language(s)** English
- **Currency** Barbados Dollar
- **Time** UTC -4
- **Region** Caribbean

Economy

Barbados has an open, market-oriented economy. The Barbados economy, formerly solely dependent on sugar, has diversified over the past 30 years into services (tourism and financial services) and light industry and agriculture (sugar). According to the items attribute is mandatory, almost 30 per cent of men work in industry, and nearly 10 per cent for women. Relatively few are employed in agriculture. Services account for over 80 per cent of GDP (UNCTAD, 2021), and almost the same proportion of employment. In 2018, almost 1.4 million tourists arrived in the country and inbound tourism expenditure reached 22 per cent over GDP (UNWTO, 2021). As a small and open economy, Barbados is vulnerable to global economic downturns and those of its trade partners. A significant amount of income is received in the form of remittances from Barbadians overseas. Barbados' best-known export is Mount Gay Rum, one of the oldest and most famous brands of fine rum in the world and produced in Barbados since 1703. Given this history, it is not surprising that the export of beverages constitutes well over 10 per cent of the value of commodity exports in Barbados. The main export partners include, for instance the United States of America, Trinidad and Tobago and Jamaica.

Land area



430km²

Arable land



16.3%

Forest area



15%

Coastline length



97km

Exclusive economic zone



183 773km²

Nearest neighbour



174km

Terrestrial protected area
2018



1.3%

Marine protected area
2018



0.01%

GDP per capita
2019



US\$18 149

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP
2018



126.3%

Food import dependency
Average 2015-2019



13.86

Economic and environmental vulnerability index
2019



16



Belize

- **Capital** Belmopan (17°15'N 88°46'W)
- **International airport(s)** Philip S. W. Goldson Airport
- **Official language(s)** English
- **Currency** Belize dollar
- **Time** UTC -6
- **Region** Caribbean

Economy

Belize's economy has traditionally been based primarily on agriculture. Key export crops include citrus, sugar, banana, and marine products such as shrimp ([World Bank, 2020](#)). According to the FAO ([FAO, 2020](#)), less than 4 per cent of the territory is classified as arable land. The share of agriculture, hunting, forestry and fishing in total value added has fallen to just below 11 per cent in 2019, whereas services now account for three quarters ([UNCTAD, 2021](#)). Agriculture accounts for about 17 per cent of employment in the country; roughly 24 per cent for men. Over 85 per cent of women and 55 per cent of men are employed in service sector ([ILO, 2020a](#)). Tourism has been gaining importance in the economy of Belize since the early 2000s: inbound tourism expenditure as a per cent of GDP was over 27 per cent in 2019 and the number of inbound tourists reached almost 1.7 million by 2018 ([UNWTO, 2021](#)). Belize's main export partners are the United States of America and the United Kingdom, jointly dominating the trade accounting for around 60 per cent of Belize's total exports. Jamaica, Ireland and Spain are also important export partners. ([UNCTAD, 2021](#)).

Land area



22 810km²

Arable land



3.9%

Forest area



57%

Coastline length



1 996km

Exclusive economic zone



36 182km²

Nearest neighbour



343km

Terrestrial protected area 2018



37.7%

Marine protected area 2018



10.08%

GDP per capita 2019



US\$4 815

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



95.2%

Food import dependency Average 2015-2019



-16.19

Economic and environmental vulnerability index 2019



40



Cuba

- **Capital** Havana (23°8'N, 82°23'W)
- **International airport(s)** José Martí International Airport
- **Official language(s)** Spanish
- **Currency** Cuban peso
- **Time** UTC -5
- **Region** Caribbean

Economy

Travel and tourism are important for Cuba. In 2018, over 4.7 million tourists visited Cuba ([UNWTO, 2021](#)). With few natural or mineral resources and water shortages, exacerbated by cycles of sustained drought, agriculture is mostly subsistence-level. According to the FAO ([2020](#)), over 28 per cent of the territory is classified as arable land. The soil is highly fertile, but agriculture is highly dependent on precipitation. The main crops grown include among others sugarcane, tobacco, rice, citrus fruits and potatoes. Sugar, beverages and tobacco are important export products, and the main export destinations include China, Canada and Venezuela ([UNCTAD, 2021](#)).

In 2019, agriculture accounted for about 18 per cent of employment in Cuba; roughly 24 per cent for men and 7 per cent for women. In total, two in three Cubans worked in services, four in five among women. Industry employed 10 per cent of women and 20 per cent of men. ([ILO, 2020a](#)) The Cuban economy is dominated by state-run enterprises and most people are employed by the state. Cuba is classified as an upper middle income country ([World Bank, 2021a](#)) and GDP reached US\$9

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



103 800km²



28.0%



31%



14 519km



364 511km²



562km



16.6%



4.32%

GDP per capita 2019



US\$9 296

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



78.2%

Food import dependency Average 2015-2019



15.76

Economic and environmental vulnerability index 2019



28



Dominica

- **Capital** Roseau (15°18'N 61°23'W)
- **International airport(s)** Douglas-Charles Airport, Marigot
- **Official language(s)** English
- **Currency** East Caribbean dollar (XCD)
- **Time** UTC -4
- **Region** Caribbean

Economy

Dominica has traditionally been dependent on agriculture, mainly bananas, but is diversifying its economy to make the country an eco-tourism destination. In addition to bananas, its main export products include soap, bay oil, vegetables and revenue stamps. Nearly one third of the labour force works in agriculture. The economy is highly vulnerable to natural disasters and weather conditions. Economic growth relies on increases in tourism, construction, and offshore and other services, in addition to the banana industry.

Tourism has developed more slowly in Dominica than on other Caribbean islands. Cruise ship stopovers have increased with the better availability of modern waterfront facilities in the capital, Roseau. Dominica makes an attractive tourism destination with its mountains, rainforests, lakes and hot springs, waterfalls and related water sport opportunities. In 2019, Dominica attracted over 322 thousand tourist arrivals compared to 199 thousand in 2018. The growth is likely to have increased inbound tourism expenditure over GDP from 21 per cent recorded in 2018. ([UNWTO, 2021](#).)

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



103 800km²



28.0%



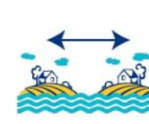
31%



14 519km



364 511km²



562km



16.6%



4.32%

GDP per capita 2019



US\$9 296

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



78.2%

Food import dependency Average 2015-2019



15.76

Economic and environmental vulnerability index 2019



28



Dominican Republic

- **Capital** Santo Domingo (18°28'N, 69°57'W)
- **International airport(s)** Punta Cana International Airport, Las Américas International Airport, Cibao International Airport, Gregorio Luperón International Airport
- **Official language(s)** Spanish
- **Currency** Dominican Peso
- **Time** UTC -4

Economy

Historically, the Dominican Republic's economy was dominated by agriculture, and the country was known for its exports of sugar, cocoa, coffee and tobacco. Over the last three decades, the economy has made an effective move to a diversified mix of services, manufacturing, agriculture, mining and trade. The Dominican Republic is the site of one of the largest gold mines in the world, the Pueblo Viejo mine.

In 2019, the service sector accounted for 63 per cent of GDP, while manufacturing accounted for a further 31 per cent. From 2010 to 2019, real GDP increased on average by 5.3 per cent annually, indicating steady, robust growth. Its most important trade partner is the United States of America, the destination of about half of the Dominican Republic's exports in 2019. (UNCTAD, 2021). The country is classified as upper middle income economy (World Bank, 2021a)

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



48 310km²



18.2%



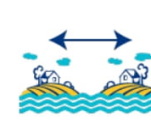
44%



1 612km



269 489km²



254km



26.2%



17.96%

GDP per capita 2019



US\$8 282

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



46.2%

Food import dependency Average 2015-2019



6.81

Economic and environmental vulnerability index 2019



22



Grenada

- **Capital** St. George's (12°03' N 61°45' W)
- **International airport(s)** Maurice Bishop International Airport, St George's
- **Official language(s)** English
- **Currency** East Caribbean dollar (XCD)
- **Time** UTC -4
- **Region** Caribbean

Economy

Tourism plays an important role in Grenada's economy - since 2018, Grenada has attracted about 0.5 million tourist arrivals each year leading to an inbound tourism expenditure of about 46 per cent over GDP ([UNWTO, 2021](#)). Services, including tourism, form the largest economic sector with about an 80 per cent share of GDP ([UNCTAD, 2021](#)). Important infrastructural investments and projects related to tourism have been recently reflected in the growth of the construction sector in Grenada. Another central industry is the production of spices, especially nutmeg and mace. Grenada is sometimes called the 'spice island', as it is one of the biggest producers of nutmeg in the world. The main export partners include the United States of America, Japan, Dominica, Saint Lucia and Saint Kitts and Nevis ([UNCTAD, 2021](#)).

Terrestrial protected area
2018

Marine protected area
2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



340km²



8.8%



52%



252km



26 133km²



140km



9.8%



0.09%

GDP per capita
2019



US\$10 818

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP
2018



52.9%

Food import dependency
Average 2015-2019



18.09

Economic and environmental vulnerability index
2019



34



Guyana

- **Capital** Georgetown (30°37'N, 97°40'W)
- **International airport(s)** Cheddi Jagan International
- **Official language(s)** English
- **Currency** Guyana Dollar
- **Time** UTC -4
- **Region** Caribbean

Economy

Agriculture, fishing together with mining are among Guyana's most important economic activities, with sugar, rum, rice and gold production accounting for 70 to 75 per cent of export earnings. The share of agriculture, hunting, forestry, fishing in GDP has been gradually declining over the years and was just below 20 per cent in 2019, while industry accounts for almost one third and services nearly half of GDP. ([UNCTAD, 2021](#))

In 2019, 17 per cent of the labor force was engaged in agriculture, 23 per cent in industry, and 60 per cent in the services sector ([ILO, 2020a](#)). Over 80 per cent of employed women were engaged in service jobs. Despite this high employment share in services, in 2019, inbound tourism expenditure accounted for only 0.6 per cent of GDP ([UNWTO, 2021](#)). In 2019, top destinations for exports included Germany, Canada, and Trinidad and Tobago ([UNCTAD, 2021](#)).

Terrestrial protected area
2018

Marine protected area
2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



196 850km²



2.1%



94%



1 154km



140 369km²



349km



8.7%



0.01%

GDP per capita
2019



US\$6 610

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP
2018



33.3%

Food import dependency
Average 2015-2019



-5.28

Economic and environmental
vulnerability index
2019



46



Haiti

- **Capital** Port-au-Prince (18°32'N 72°20'W)
- **International airport(s)** Toussaint Louverture International Cap-Haïtien International Airport
- **Official language(s)** French, Haitian Creole
- **Currency** Gourde
- **Time** UTC-5
- **Region** Caribbean

Economy

Agriculture plays an important role in the Haitian economy: it accounts for almost 29 per cent of employment in the country; roughly 42 per cent for men ([ILO, 2020a](#)). According to FAO ([FAO, 2020](#)), almost 40 per cent of the territory is classified as arable land. The share of agriculture, hunting, forestry and fishing in total value added has been relatively stable in the last two decades, at about 20 per cent; stability has also been observed in industry (roughly one third) and services, which generate just below half of Haiti's total value added ([UNCTAD, 2021](#)). Over 85 per cent of women and 47 per cent of men in Haiti are employed in services ([ILO, 2020a](#)).

Tourism has been gaining importance in the economy of Haiti. The number of inbound tourists has been steadily rising, reaching over 1.3 million in 2018 and 0.9 million in 2019, yet inbound tourism expenditure as a per cent of GDP has remained steady at about 6 per cent ([UNWTO, 2021](#)). Haiti's main trade partner is the United States of America, dominating both imports and exports with 62 and 77 per cent shares in Haiti's trade, respectively ([UNCTAD, 2021](#)).

Terrestrial protected area
2018

Marine protected area
2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



27 560km²



38.8%



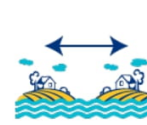
13%



1 977km



123 525km²



254km



2%



0%

GDP per capita
2019



US\$715

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP
2018



96.8%

Food import dependency
Average 2015-2019



40.78

Economic and environmental vulnerability index
2019



33



Jamaica

- **Capital** Kingston (17°58'N 76°47'W)
- **International airport(s)** Sangster International Airport, Montego Bay; Norman Manley International Airport, Kingston; Ian Fleming International Airport, Ocho Rios
- **Official language(s)** English
- **Currency** Jamaican dollar (JMD)
- **Time** UTC -5
- **Region** Caribbean

Economy

Jamaica's economy is heavily dependent on services, which account for around 70 per cent of GDP since 2000. Remittances from abroad (16 per cent of GDP) and tourism constitute an important source of foreign exchange. (UNCTAD, 2021) Jamaica received over 4.2 million tourist arrivals in 2019 with an inbound tourism expenditure of almost 22 per cent over GDP (UNWTO, 2021). Agriculture, forestry and fishing account for 8 per cent of GDP and provide one sixth of employment. The main agricultural products include sugarcane, bananas, coconuts, oranges, coffee, cacao and ginger. Jamaica is one of the world's largest exporters and producers of rum, and it exports some beer as well. Jamaica is a large producer of bauxite and alumina. The main manufacturing products are processed foods, textiles, metal and petroleum products, and key destinations include the United States of America, the Netherlands, Canada and Iceland.

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



10 830km²



11.1%



54%



895km



263 284km²



480km



15.9%



0.75%

GDP per capita 2019



US\$5 369

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



20.6%

Food import dependency Average 2015-2019



12.78

Economic and environmental vulnerability index 2019



29



St Kitts and Nevis

- **Capital** Basseterre (17°18'N 62°44'W)
- **International airport(s)** Robert L. Bradshaw International Airport, Saint Kitts; Vance W. Amory International Airport, Nevis
- **Official language(s)** English
- **Currency** East Caribbean dollar (XCD)
- **Time** UTC -4
- **Region** Caribbean

Economy

The economy of Saint Kitts and Nevis is characterised by the dominant tourism sector, diversified manufacturing and some agriculture. Sugar was the primary export early on, but rising production costs, low market prices and efforts to reduce dependence on sugar have led to increasing diversification of agricultural production. In recent years, construction has been booming, now accounting for about one fifth share of GDP.

According to items attribute is mandatory, Saint Kitts and Nevis attracted 1.1 million tourist arrivals in 2019 and 1.3 million in 2018, and the inbound tourism expenditure was 37 per cent over GDP in 2018. In addition to a high dependence on tourism, the country is seeking to diversify its sources of revenue by developing agriculture, increasing the export-orientation of manufacturing and enabling financial services. The country exports many kinds of electrical products, switches and radios. Saint Kitts and Nevis' principal export destinations are United States of America, Bangladesh and Malta. At over 70 per cent, the service sector accounts for most of the country's GDP. ([UNCTAD, 2021](#))

Land area



260km²

Arable land



19.2%

Forest area



42%

Coastline length



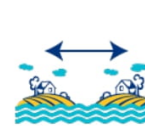
243km

Exclusive economic zone



10 209km²

Nearest neighbour



87km

Terrestrial protected area 2018



3.3%

Marine protected area 2018



0.17%

GDP per capita 2019



US\$19 892

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



50.3%

Food import dependency
Average 2015-2019



19.24

Economic and environmental vulnerability index 2019



35



St Lucia

- **Capital** Castries (14°1'N 60°59'W)
- **International airport(s)** Hewanorra International Airport (UVF) Vieux Fort and George F. L. Charles Airport (SLU) in Castries
- **Official language(s)** English
- **Currency** East Caribbean dollar (XCD)
- **Time** UTC -4
- **Region** Caribbean

Economy

Saint Lucia is attractive to foreign businesses and investments in banking and the tourism sector. The educated workforce and improvements in infrastructure, including roads, water supply, sewerage, communications and ports contribute to a positive investment environment. Manufacturing makes a relatively small contribution to GDP, but is diverse. St. Lucia is currently trying to revitalise its banana industry. In addition, Saint Lucia exports beer, jewellery, automobiles and petroleum products. The main export destinations are the United States of America, United Kingdom and Trinidad and Tobago. The service sector accounts for most of the country's GDP, with agriculture playing a smaller role compared with many other SIDS. Trade, restaurants and hotels contributing about 30 per cent of the country's GDP (UNCTAD, 2021). All in all, travel and tourism are vital to the economy with 1.2 million tourist arrivals in 2019 and an inbound tourism expenditure of 46 per cent over GDP (UNWTO, 2021). Peak tourism seasons is the dry season when cruise ships visit the ports of Saint Lucia.

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



610km²

4.9%

34%

166km

15 472km²

95km



18.8%

0.22%

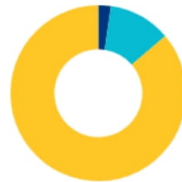
GDP per capita 2019

Main economic sectors, 2019
Percentage of GDP

Public debt as % of GDP 2018

Food import dependency Average 2015-2019

Economic and environmental vulnerability index 2019



US\$11 611

● Services
● Industry
● Agriculture, hunting, forestry, fishing

74.5%

10.81

32



St. Vincent and the Grenadines

- **Capital** Kingstown (13°10'N 61°14'W)
- **International airport(s)** Argyle International Airport
- **Official language(s)** English
- **Currency** East Caribbean dollar (XCD)
- **Time** UTC -4
- **Region** Caribbean

Economy

Agriculture contributes less than 10 per cent to GDP, but important agricultural products, like banana and crop are cultivated and exported. The country also produces and exports beer and distils rum. At 70 per cent, the service sector accounts for most of the country's GDP ([UNCTAD, 2021](#)), and almost the same share of employment ([ILO, 2020a](#)). The service sector is dominated by tourism. According items attribute is mandatory, tourism arrivals in Saint Vincent and the Grenadines have reached 392 thousand in 2019 and inbound tourism expenditure equalled 30 per cent over GDP in 2018. The filming of movies, like the Pirates of the Caribbean, has attracted visitors, which has stimulated construction work to improve the infrastructure to enable increasing tourist flows. Unemployment has been high and tropical storms occasionally cause serious problems to banana and coconut plantations, hampering economic development. There are some manufacturing and offshore financial activities that attract international businesses. The main export destinations are Jordan, France and Switzerland in addition to the other Caribbean islands ([UNCTAD, 2021](#)).

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



390km²



5.1%



73%



264km



36 304km²



95km



22.4%



0.22%

GDP per capita 2019



US\$7 436

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



56.9%

Food import dependency Average 2015-2019



17.03

Economic and environmental vulnerability index 2019



28



Suriname

- **Capital** Paramaribo (5°50'N 55°10'W)
- **International airport(s)** Johan Adolf Pengel International Airport
- **Official language(s)** Dutch
- **Currency** Surinamese Dollar
- **Time** UTC -3
- **Region** Caribbean

Economy

Suriname has an economy concentrated on mining and natural resource extraction, particularly bauxite, which makes up a large portion of GDP and exports. Agriculture, especially products like rice and bananas, also make up a significant portion of the economy, as well as aquaculture products such as shrimp. In 2019, 8 per cent of the labor force was engaged in agriculture, 23 per cent in industry, mostly the processing of bauxite into aluminum, and 69 per cent in the services sector ([ILO, 2020a](#)). Despite this high employment share in services and Suriname's natural features, tourism remains a nascent industry with inbound tourism expenditure accounting for only 1.6 per cent of GDP in 2019 ([UNWTO, 2021](#)). Remittances are another important income source, flowing mainly from the Netherlands, the United States of America and French Guiana. In 2019, top destinations for exports included Switzerland, China Hong Kong SAR, the United Arab Emirates, Belgium and Guyana ([UNCTAD, 2021](#)).

Terrestrial protected area 2018

Marine protected area 2018

Land area



156 000km²

Arable land



0.4%

Forest area



98%

Coastline length



620km

Exclusive economic zone



127 817km²

Nearest neighbour



349km



14.5%



1.54%

GDP per capita 2019



US\$6 360

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



5.3%

Food import dependency Average 2015-2019



3.94

Economic and environmental vulnerability index 2019



44



Trinidad and Tobago

- **Capital** Port of Spain (10°40'N 61°30'W)
- **International airport(s)** Piarco International Airport, Piarco; A.N.R.Robinson International Airport, Crown Point
- **Official language(s)** English
- **Currency** Trinidad and Tobago dollar (TTD)
- **Time** UTC -4
- **Region** Caribbean

Economy

Trinidad and Tobago is one of the most developed economies in the Caribbean, with a correspondingly high GDP per capita of US\$17 000, current prices, in 2019 ([UNCTAD, 2021](#)). The economy is strongly influenced by the petroleum industry and has a viable manufacturing sector that supplies food, beverages and cement to the Caribbean region. The United States of America and many Latin American countries are important export destinations. Oil and gas typically account for around 40 per cent of GDP and 80 per cent of exports, but less than 5 per cent of employment. According to items attribute is mandatory, about 60 per cent of employed men work in services and 86 per cent of women. Tourism is important, especially to Tobago, and has been growing, but is not as central to the economy as in some other Caribbean islands. In 2019, the country received 480 thousand tourist arrivals with an inbound tourism expenditure of 2 per cent over GDP ([UNWTO, 2021](#)). The main agricultural products include citrus and cocoa.

Terrestrial protected area 2018

Marine protected area 2018

Land area

Arable land

Forest area

Coastline length

Exclusive economic zone

Nearest neighbour



5 130km²



4.9%



45%



704km



79 798km²



158km



30.6%



0.05%

GDP per capita 2019



US\$16 637

Main economic sectors, 2019
Percentage of GDP



● Services
● Industry
● Agriculture, hunting, forestry, fishing

Public debt as % of GDP 2018



44.9%

Food import dependency Average 2015-2019



7.60

Economic and environmental vulnerability index 2019



28

Appendix 2 Useful resources

Dashboards

- COVID-19 Data Futures Platform
<https://data.undp.org/>
- COVID-19 Global Gender Response Tracker (GGR Tracker)
<https://data.undp.org/gendertracker/>
- UNDP Global Preparedness and Vulnerability Dashboards
<http://hdr.undp.org/en/content/global-preparedness-and-vulnerability-dashboards>
- UNICEF Tracking the situation of children during COVID-19 Dashboard
<https://data.unicef.org/resources/rapid-situation-tracking-covid-19-socioeconomic-impacts-data-viz/>
- UNICEF Data to inform the COVID-19 response Dashboard
<https://data.unicef.org/resources/data-to-inform-the-covid-19-response/>
- UNICEF Dashboard on government responses to COVID-19 and the affected populations Dashboard
<https://data.unicef.org/resources/government-responses-due-to-covid-19-affected-populations/>
- UNWTO Tourism data Dashboard
<https://www.unwto.org/unwto-tourism-dashboard>
- WHO Coronavirus (COVID-19) Dashboard
<https://covid19.who.int/>

Dialogues

- The impact of COVID on gender
<https://www.youtube.com/watch?app=desktop&v=6TOW3d24z6c>

Forecasting systems

- International Futures forecasting system at the Pardee Center
http://www.ifs.du.edu/ifs/frm_MainMenu.aspx

Learning platforms

- UNWTO Online Academy
<https://www.unwto-tourismacademy.ie.edu/>

Webinars

- COVID-19: A Wake up Call for Regional Food & Nutrition Security
<https://www.facebook.com/UWITV/videos/covid-19-a-wake-up-call-for-regional-food-nutrition-security/568155197162165/>
- Implementing SDG 14 with the Communities of Ocean Action
<https://www.youtube.com/watch?v=H9Lg1d0a4B8>
- Informing the post-2020 Global Biodiversity Framework - SIDS and spatial data (Caribbean region)
<https://www.youtube.com/watch?v=Q0I7rkzbZNA>
- Keeping the Momentum for Ocean Action: Investing in SDG 14
<https://www.youtube.com/watch?v=I2oM1KWqtv8>
- Leveraging Digital Government & Spearheading Innovative Digital Solutions to Address COVID-19
https://www.youtube.com/watch?app=desktop&v=fMafo_BtoyY

Appendix 3 Survey Instrument utilised to collect insights from key informants

Environmental impacts

1. Have any decisions been made/measures put in place (related to the following areas) to 'build back better' which have the potential for significant negative impacts on the environment and/or biodiversity?
2. If yes to any of the above, identify the specific decisions made/measures put in place
3. What impact has COVID-19 had on the environment?
4. Identify any positive impacts
5. Identify any negative impacts
6. Identify recommendations/mitigation actions for overcoming any negative COVID-19 impacts on the environment
7. Identify recommendations for sustaining any positive COVID-19 outcomes pertaining to the environment
8. Has COVID-19 impacted the ability to comply with obligations made under the various Global and Regional MEAs?
9. If yes, how?

Mitigation actions to enhance resilience following the shocks precipitated by the COVID-19 pandemic

10. What mitigation actions would be required to enhance the resilience of SIDS, following the shocks precipitated by the COVID-19 pandemic?
11. What support would be required to achieve the identified mitigations actions (and from whom)?
12. Have there been any mitigation actions taken (knee jerk reactions) to respond to the economic impacts of COVID-19 that may further negatively impact biodiversity?
13. If yes, identify

Major actions required for the effective implementation of the post-2020 Global Biodiversity Framework, Agenda 2030 (SDGs) and other relevant Multilateral Environmental Agreements (MEAs)

14. What major actions would be required for the effective implementation of the post-2020 Global Biodiversity Framework, Agenda 2030 for ocean related SDGs and other relevant MEAs?
15. What support would be required to achieve the identified majors actions (and from whom)?
16. Have there been any major actions taken (knee jerk reactions) to respond to the economic impacts of COVID-19 that may impact the implementation of the post-2020 Global Biodiversity Framework, Agenda 2030 (SDGs) and other relevant MEAs?
17. If yes, identify

Economic impacts

18. What impact has COVID-19 had on:
 - GDP
 - Tourism
 - Fisheries (marine)
 - Aquaculture (marine)
 - Trade (imports and exports)
 - Poverty

For each of the above-mentioned areas, the following questions were asked:

19. Identify any positive impacts
20. Identify any negative impacts
21. Identify recommendations/mitigation actions for overcoming any negative COVID-19 impacts
22. Identify recommendations for sustaining any positive COVID-19 outcomes

Socio-cultural impacts

23. What impact has COVID-19 had on:
 - Gender (regarding inclusion, equality, access to benefits etc).
 - Culture (regarding values, religion, materials, language, education etc.)

For each of the above-mentioned areas, the following questions were asked:

24. Identify any positive impacts
25. Identify any negative impacts
26. Identify recommendations/mitigation actions for overcoming any negative COVID-19 impacts
27. Identify recommendations for sustaining any positive COVID-19 outcomes

Impacts on achieving the 2030 Agenda for Sustainable Development

Specifically SDG14 (Targets 14.1, 14.5, 14.7, 14.a and 14.c)

28. What impact has COVID-19 had on the achievement of each of the respective targets
29. Identify any positive impacts
30. Identify any negative impacts
31. Were specific measures to achieve the respective targets being implemented before COVID-19?
32. If yes to any, identify the specific measures
33. What impact has COVID-19 had on the implementation of the identified specific target measures?
34. Identify any positive impacts on identified measures
35. Identify any negative impacts on identified measures
36. Were any specific measures to achieve these targets initiated after COVID-19?
37. If yes to any, identify the specific measures
38. What major actions would be required to achieve these targets (given the current global situation)?
39. What support would be required (and from whom)?

Marine protected and conserved areas

40. Has COVID-19 impacted (positively and/or negatively) the operations of MPAs?
41. Identify any positive impacts
42. Identify any negative impact
43. Were any specific measures pertaining to the operations of MPAs initiated as a result of COVID-19?
44. If yes, identify the specific measures
45. What major actions would be required to improve the operations of MPAs?
46. What support would be required (and from whom)?

Impacts on achieving the Aichi Biodiversity Targets

Specifically Targets 3, 6, 8, 10, 11, 17, 18 and 19

47. What impact has COVID-19 had on the achievement of the respective targets
48. Identify any positive impacts
49. Identify any negative impacts
50. Were specific measures to achieve the respective targets being implemented before COVID-19?
51. If yes to any, identify the specific measures
52. What impact has COVID-19 had on the implementation of the identified specific target measures?
53. Identify any positive impacts on identified measures
54. Identify any negative impacts on identified measures
55. Were any specific measures to achieve these targets initiated as a result of COVID-19?
56. If yes to any, identify the specific measures
57. What major actions would be required to achieve these targets (given the current global situation)?

58. What support would be required (and from whom)?

Impact on addressing the priority areas identified within the SAMOA Pathway

Priority areas:

- Sustainable economic growth
- Climate change adaptation and mitigation
- Biodiversity protection
- Improved human health and social development
- Partnerships among SIDS

59. Before COVID-19, were specific measures in place to promote the achievement of each priority area?

60. If yes to any, identify the specific measures

61. What impact has COVID-19 had on the implementation of the identified priority area measures?

62. Identify any positive impacts on identified measures

63. Identify any negative impacts on identified measures

64. Were any measures to promote the achievement of each priority area, initiated as a result of COVID-19?

65. If yes to any, identify the specific measures

66. What major actions would be required to further/better address these priority areas (given the current global situation)?

67. What support would be required (and from whom)?

Impact on participation in the development of the Post-2020 Global Biodiversity Framework

68. Indicate any participation in any of the opportunities for input to the development of the post-2020 global biodiversity framework

69. Has COVID-19 posed any challenges to participating in the identified opportunities for development of the post-2020 global biodiversity framework?

70. If yes, identify the specific challenges

71. What major actions would be required to participate (further) in the development of the post-2020 global biodiversity framework (given the current global situation)?

72. What support would be required (and from whom)?

Impact on participation in the negotiations of Biodiversity in Areas Beyond National Jurisdiction (BBNJ)

73. Indicate any participation in any of the opportunities outlined in the programme of intersessional work for negotiations of the BBNJ

74. Has COVID-19 posed any challenges regarding participation in the programme of intersessional work?

75. If yes, identify the specific challenges

76. What major actions would be required to participate (further) in the negotiations of Biodiversity in Areas Beyond National Jurisdiction?

77. What support would be required (and from whom)?

Impact on the annual meetings for SIDS

78. Has COVID-19 impacted (positively and/or negatively) the intended annual meetings for SIDS National Focal Points (NFPs)?

79. Identify any positive impacts

80. Identify any negative impacts

81. Recommendations/mitigation actions for overcoming any negative COVID-19 impacts on the convening of annual meetings for SIDS NFPs

82. Recommendations for sustaining any positive COVID-19 outcomes pertaining to the convening of annual meetings for SIDS NFPs

Appendix 4 Indicator values for the multidimensional vulnerability index for SIDS

Country	Economic Vulnerability			Environmental Vulnerability		Geographical Vulnerability			Financial Vulnerability			MVI
	Exp. conc.	Exp. inst.	Agr. inst.	Agr/G DP	Victims of Dis.	Pop. in LECZ	Dry Lands	Remote	Tourism	FDI	Remit.	
Guyana	42.6	21.1	29.8	23.2	88.2	100.0	-	59.7	5.7	42.2	26.1	39.9
Grenada	14.1	26.8	65.7	9.6	83.7	16.7	-	56.2	97.5	46.0	12.4	39.0
Dominica	36.5	18.7	9.6	26.0	96.4	36.7	-	53.3	89.1	20.7	26.1	37.6
Haiti	48.2	9.5	12.3	29.3	93.3	11.6	8.0	54.6	39.0	15.1	88.4	37.2
Belize	20.9	13.1	24.8	18.6	85.0	96.7	-	64.0	46.4	22.2	14.8	37.0
Saint Kitts and Nevis	25.0	18.5	100.0	0.2	43.4	43.4	-	52.0	74.0	42.2	7.2	36.9
Antigua and Barbuda	47.7	10.8	31.0	1.6	80.5	34.8	-	51.9	95.2	31.7	5.5	35.5
Saint Lucia	41.9	8.9	49.5	1.4	94.4	9.1	-	54.3	95.0	23.4	6.1	34.9
Saint Vincent and the Grenadines	24.6	18.1	9.5	12.4	80.7	25.3	-	55.1	86.4	53.4	16.9	34.8
Suriname	70.0	20.2	30.8	18.2	54.3	100.0	-	59.7	4.7	19.5	0.2	34.3
Jamaica	43.3	12.2	5.2	11.3	75.5	26.2	-	57.2	64.7	26.0	48.2	33.6
Dominican Republic	12.0	5.8	8.8	8.7	76.1	5.3	2.2	53.6	42.6	20.0	22.4	23.4
Trinidad and Tobago	28.8	28.5	32.2	0.3	61.8	11.5	-	57.4	7.3	8.6	1.7	21.6
Barbados	7.3	9.5	14.2	0.8	39.0	6.3	-	54.7	47.6	39.6	8.7	20.7

(Sources: <https://www.un.org/ohrrls/content/list-sids>, <http://data.un.org/>)