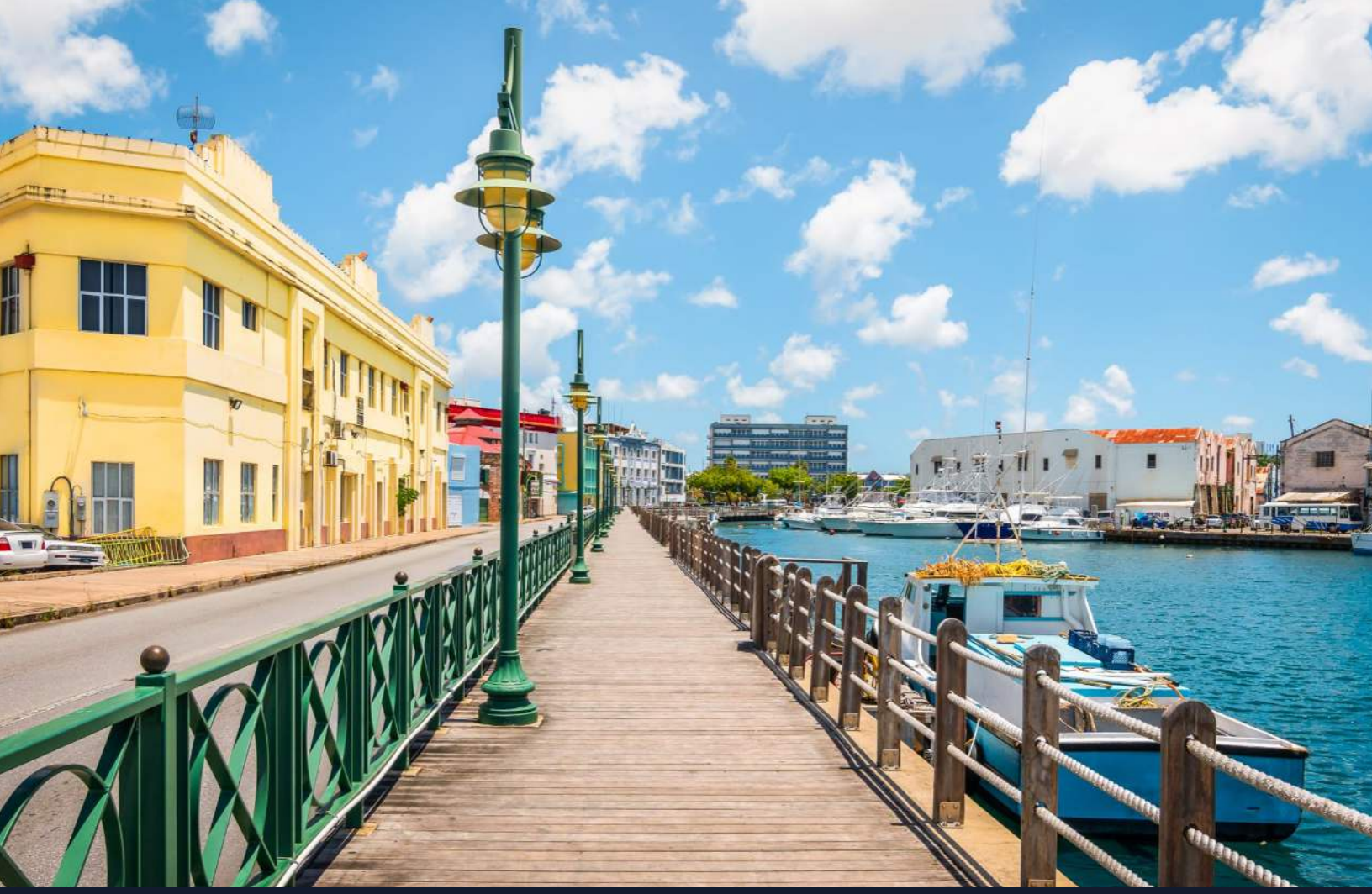

BARBADOS

NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

A DATA-DRIVEN TOOL FOR ASSESSING RISK AND BUILDING LASTING RESILIENCE

PDC | GLOBAL

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ACKNOWLEDGEMENTS

Pacific Disaster Center (PDC) would like to acknowledge all of the agencies and organizations that provided insightful inputs and guidance leading to the completion of this report, including all of the representatives who contributed to the National Disaster Preparedness Baseline Assessment (NDPBA) workshops, surveys, interviews, data validation, and analyses. We offer a special thanks to the Department of Emergency Management (DEM) for their exemplary leadership throughout the project, as well as their remarkable commitment to saving lives, reducing losses, and building a safer, more disaster-resilient Barbados.

- Barbados Defence Force (BDF)
- Barbados Government Information Service (BGIS)
- Barbados Meteorological Services (BMS)
- Barbados Red Cross Society (BRCS)
- Barbados Water Authority (BWA)
- Barbados Fire Service
- Barbados Statistical Services
- Bureau of Gender Affairs
- Coastal Zone Management Unit
- Department of Emergency Management (DEM)
- Department of Commerce and Consumer Affairs
- District Emergency Organisation
- Environmental Protection Department (EPD)
- Emergency Ambulance Service
- Government of Barbados Ministry of the Environment and National Beautification (GMNW DEO)
- Invest Barbados
- Kensington Oval Management Inc. (KOMI)
- Lands and Surveys Department
- Ministry of Agriculture
- MET VT
- Ministry of the Public Service (MPS)
- Ministry of Tourism and International Transport (MTI)
- Ministry of Transport, Works and Maintenance (MTW)
- Ministry of Agriculture, Food and Nutritional Security
- Ministry of Education, Technological and Vocational Training
- Ministry of Environment and National Beautification
- Ministry of Finance, Economic Affairs and Investment
- Ministry of Foreign Affairs and Foreign Trade
- Ministry of Health and Wellness
- Ministry of Home Affairs and Information
- Ministry of Industry, Innovation, Science, and Technology
- Ministry of Labour and Social Partnership Relations
- Ministry of People Empowerment and Elder Affairs
- Ministry of Tourism and International Transport
- Ministry of Transport, Works and Water Resources
- National Library Service
- Prime Minister's Office (Defence and Security)
- The Barbados Police Service
- USAID/BHA

LIST OF ABBREVIATIONS

BAPE: Barbados Association of Professional Engineers

BCP: Business Continuity Planning

BDF: Barbados Defence Force

BGB: Blue Green Bank

BGIS: Barbados Government Information Service

BI: Bridgetown Initiative

BMS: Barbados Meteorological Services

BNSI: Barbados National Standards Institution

BRCS: Barbados Red Cross Society

BWA: Barbados Water Authority

CDEMA: Caribbean Disaster Emergency Management Agency

CDM: Comprehensive Disaster Management

CCA: Climate Change Adaptation

COG: Continuity of Government

COOP: Continuity of Operations

DEM: Department of Emergency Management

DM: Disaster Management

DRR: Disaster Risk Reduction

EMAC: Emergency Management Advisory Council

EPD: Environmental Protection Department

GIS: Geographic Information Systems

GMHS: Government Meteorological and Hydrological Services

HAZMAT: Hazardous Materials

HOPE: Home Ownership Providing Energy

ICZM: Integrated Coastal Zone Management

KOMI: Kensington Oval Management Inc.

M of Ag: Ministry of Agriculture

MTI: Ministry of Tourism and International Transport

MTW: Ministry of Transport Works and Maintenance

MPS: Ministry of the Public Service

NEMS: National Emergency Management System

NDPBA: National Disaster Preparedness Baseline Assessment

NGO: Non-Governmental Organization

ODA: Official Development Assistance

PDC: Pacific Disaster Center

PAHO: Pan American Health Organization

QEH: Queen Elizabeth Hospital

R2RP: Roofs to Reefs Programme

RSF: Resilience and Sustainability Facility

SDG: Sustainable Development Goals

SOP: Standard Operating Procedure

T&E: Training & Exercises

UN: United Nations

UNDRR: United Nations Office for Disaster Risk Reduction

USAID: United States Agency for International Development

VNR: Voluntary National Review

WHO: World Health Organization

WFP: World Food Programme

WMO: World Meteorological Organization

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NDPBA

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Pacific Disaster Center (PDC) completed the Barbados National Disaster Preparedness Baseline Assessment (NDPBA) in partnership with the Department of Emergency Management (DEM) and the support of in-country stakeholders. The NDPBA examines each country's unique hazard profile, cultural characteristics, geographical and geopolitical context, historical events, and other factors that could impact, both positively and negatively, a country's ability to manage disasters. Recommendations, at strategic and tactical levels, are developed based on the findings of the assessment and are aligned with the United Nations Sustainable Development Goals (SDGs) and the Sendai Framework for Disaster Risk Reduction.

The Assessment consists of two components: the Risk and Vulnerability Assessment (RVA) and the Disaster Management Analysis (DMA). The RVA looks at the multi-hazard exposure, social-economic vulnerabilities, island capacities and internal and external logistics capacities. The DMA takes a qualitative approach to assess six thematic areas -- Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management. The DMA results are used to contextualize the results of the RVA, providing a comprehensive understanding of the current Disaster Management landscape. In coordination with DEM, PDC leverages the assessment findings to build recommendations and a Disaster Risk Reduction 5-Year Action Plan that allows for better targeted use of limited resources and identification of additional funding opportunities.

The RVA results for Barbados showed significant exposure due to a variety of hazards including hurricane winds, earthquakes, and ashfall from nearby La Soufriere volcano. The detailed hazard exposure analysis reveals that critical infrastructure and densely populated urban areas are particularly susceptible, highlighting the need for risk reduction activities. Additionally, socioeconomic vulnerabilities related to housing, health, and economic constraints were identified. Limited logistics capacities have the potential to exacerbate the impacts of future disasters. Nonetheless, Barbados has demonstrated resilience through well-established disaster governance mechanisms and proactive environmental policies that contribute to the island's overall disaster preparedness.

The DMA for Barbados shows significant strengths in Institutional Arrangements and a robust Enabling Environment of policies and legislation. The 2023 Comprehensive Disaster Management Policy complements the nation's proactive approach to integrating disaster risk reduction, climate

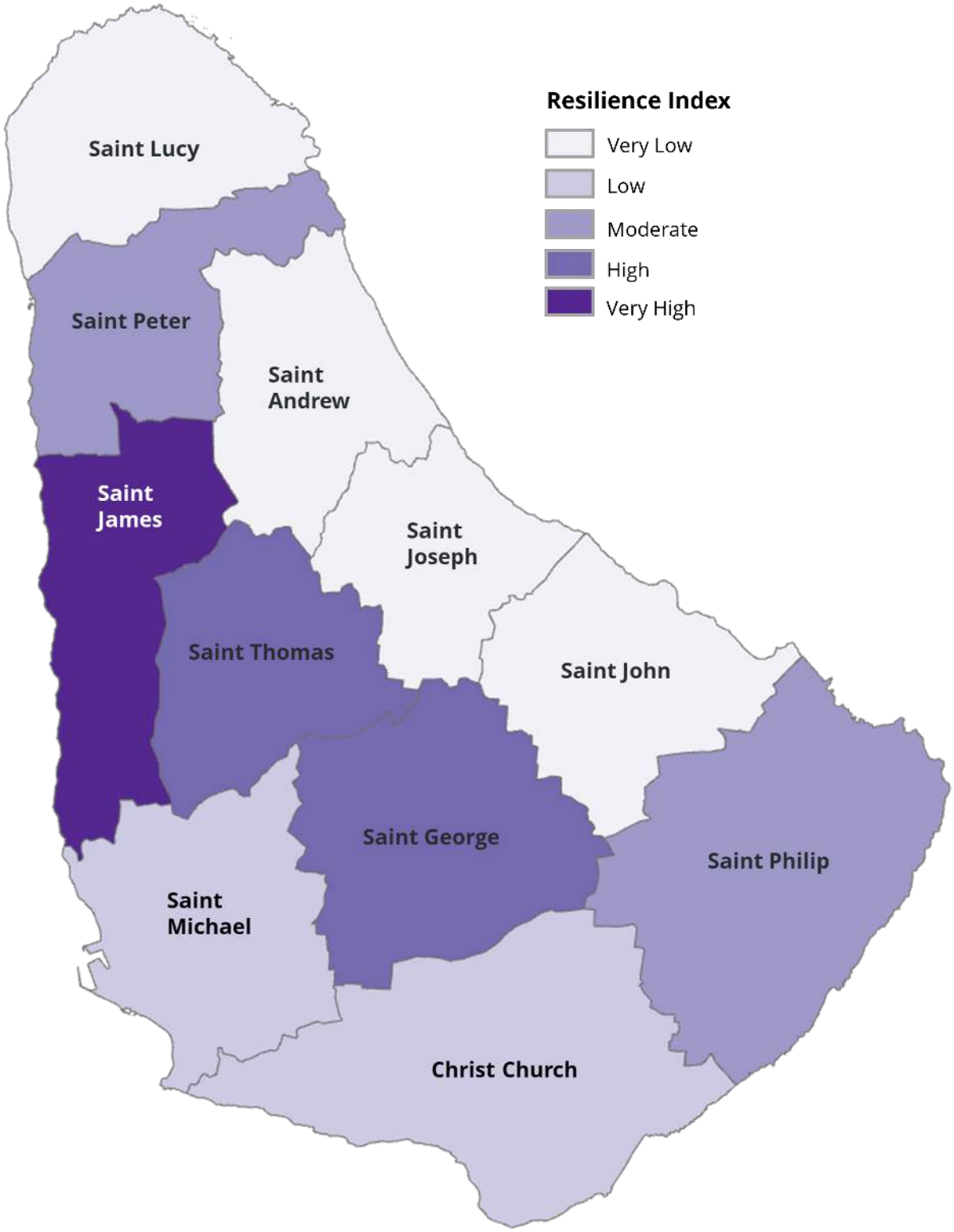
change adaptation, and sustainable development goals. While these strengths show progress in overall disaster resilience in Barbados, the DMA further identifies critical needs in financial support, information management systems, and expanding the capacity and scope of training programs. Strengthening these areas will fortify Barbados' resilience to the predicted impacts of climate change and existing hazards and improve the effectiveness of response and recovery operations.

Barbados faces an increased risk from climate change, and with that a need to establish a national climate and disaster risk financing strategy. Implementing the recommendations shared in this report will significantly advance Barbados' preparedness and disaster management capabilities.

The NDPBA was funded by the United States Government through the US Southern Command and was conducted in coordination with the U.S. Embassy in Barbados. Although DEM was PDC's in-country partner during this project, the Center also developed relationships with multiple government and non-governmental agencies in Barbados that supported the data gathering and vetting process. A complete list of PDC's valued partners in the NDPBA effort is included in this report.

To access findings, recommendations, and data developed for this analysis, please visit PDC's all-hazard early warning and decision support application for disaster managers and humanitarian assistance practitioners, DisasterAWARE Pro® (https://disasteraware.pdc.org/).

SUMMARY OF FINDINGS

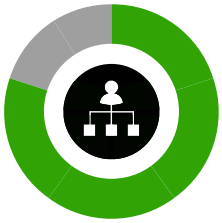


DISASTER MANAGEMENT ANALYSIS

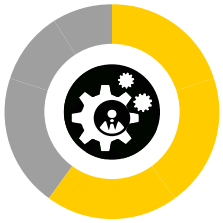
Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

CURRENT STATUS

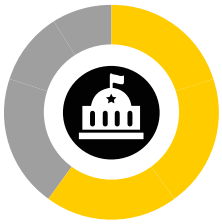
Limited or No Capacity — Advanced Capacity



Institutional Arrangements

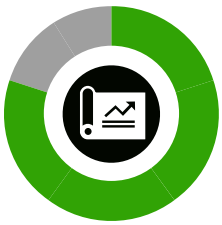


Capabilities and Resources

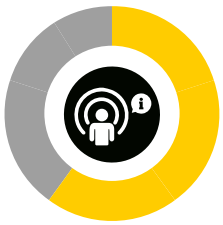


Enabling Environment

Capacity Development



Disaster Governance Mechanisms



Communication and Information Management

RECOMMENDATIONS

These recommendations are included in greater detail in the body of the report. Leveraging the results of this comprehensive assessment may allow the Government of Barbados and key development and disaster management partners to enable a more robust and sustainable disaster risk-reduction effort in Barbados that will contribute to saving lives and property.

IN LIGHT OF OUR FINDINGS, PDC MAKES THE FOLLOWING RECOMMENDATIONS:

1. **Ensure that a portion of the international climate funding received at the national level is available to the DEM** to support necessary mitigation and adaptation measures, especially where disaster risk reduction initiatives directly support climate change adaptation.

2. **Increase communication and collaboration of all government ministries and departments** engaged in the Emergency Management Advisory Council (EMAC) and National Emergency Management System (NEMS).

3. **Promote evidence-based decision-making** by supporting a centralized multi-agency data repository for disaster management, risk reduction, and resilience.

4. **Establish within the DEM a centralized digital repository of Disaster Management supplies** and resources to support strategic designation and maintenance of storage facilities throughout the country.

5 **Conduct a comprehensive planning audit** to identify necessary plans that do not exist and update existing plans that have become outdated.

6 **Ensure that disaster management plans consider the complexities and potential cascading impacts** associated with response to emergencies in densely populated communities and urban areas.

7 **Utilize GIS-mapping capabilities and systems** to address geospatial data and logistics to inform community-based disaster management and planning efforts.

8 **Formulate and disseminate Disaster Management and Disaster Risk Reduction development plans** and strategies to drive initiatives towards advanced capacity.

9 **Formalize disaster training and exercise initiatives i**nto a centralized official program, led and coordinated by the DEM.

10 **Increase the annual budget to directly support the Department of Emergency Management's (DEM)** growing need for technical staff and expanded programs required to meet the predicted escalation in climate-related hazards affecting Barbados.

11 **Conduct a formal review of current building codes** and propose additional codes if needed in collaboration with the Department of Emergency Management (DEM), Ministry of Public Works - Barbados Building Authority, and Prime Minister's Office - Town Planning Department.

12 **Expand awareness and preparedness campaigns** among residents, visitors, and businesses for natural and manmade hazards affecting Barbados.

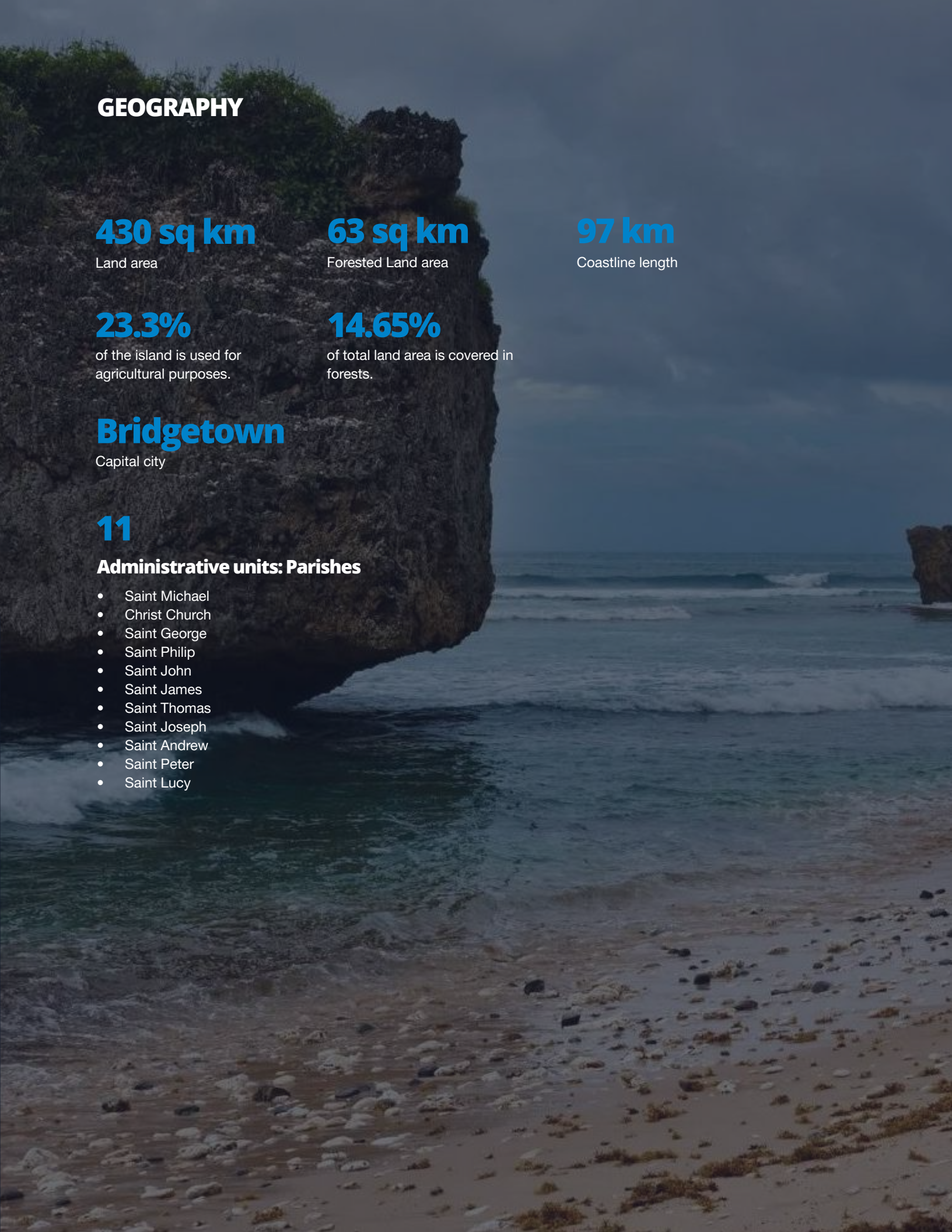
13 **Expand the Tsunami Ready programme** to all susceptible Parishes located within the Tsunami hazard zones.

14 **Strengthen all-hazards monitoring and communications systems** and data translation into comprehensive early warning systems (EWS) capabilities.

15 **Export successes and lessons learned through Barbados' capacity-building efforts**, including the Roofs to Reefs Program, to support climate resilience and risk reduction actions nationally and internationally.

NDPBA

COUNTRY BACKGROUND



GEOGRAPHY

430 sq km
Land area

63 sq km
Forested Land area

97 km
Coastline length

23.3%
of the island is used for agricultural purposes.

14.65%
of total land area is covered in forests.

Bridgetown
Capital city

11
Administrative units: Parishes

- Saint Michael
- Christ Church
- Saint George
- Saint Philip
- Saint John
- Saint James
- Saint Thomas
- Saint Joseph
- Saint Andrew
- Saint Peter
- Saint Lucy

DEMOGRAPHICS

269,806
Total population (2021)

636 persons per sq km
Population density (2018)

89%
of total population live in urban areas.

31.3%
Urban population (2022)

92.4% African descent
12% Mixed
3% White
3% East Indian
3% Other
3% Unspecified

ACCESS TO INFORMATION

36.47%
Fixed broadband subscribers (per 100 people)

99.6%
Adult literacy rate

Education is compulsory for children ages 5-16.

2.5
Physicians per 1k people

77.7
Average life expectancy

41.86
Adolescent fertility rate per 1,000 women (ages 15-19)

3.1
Nurses and midwives per 1k people

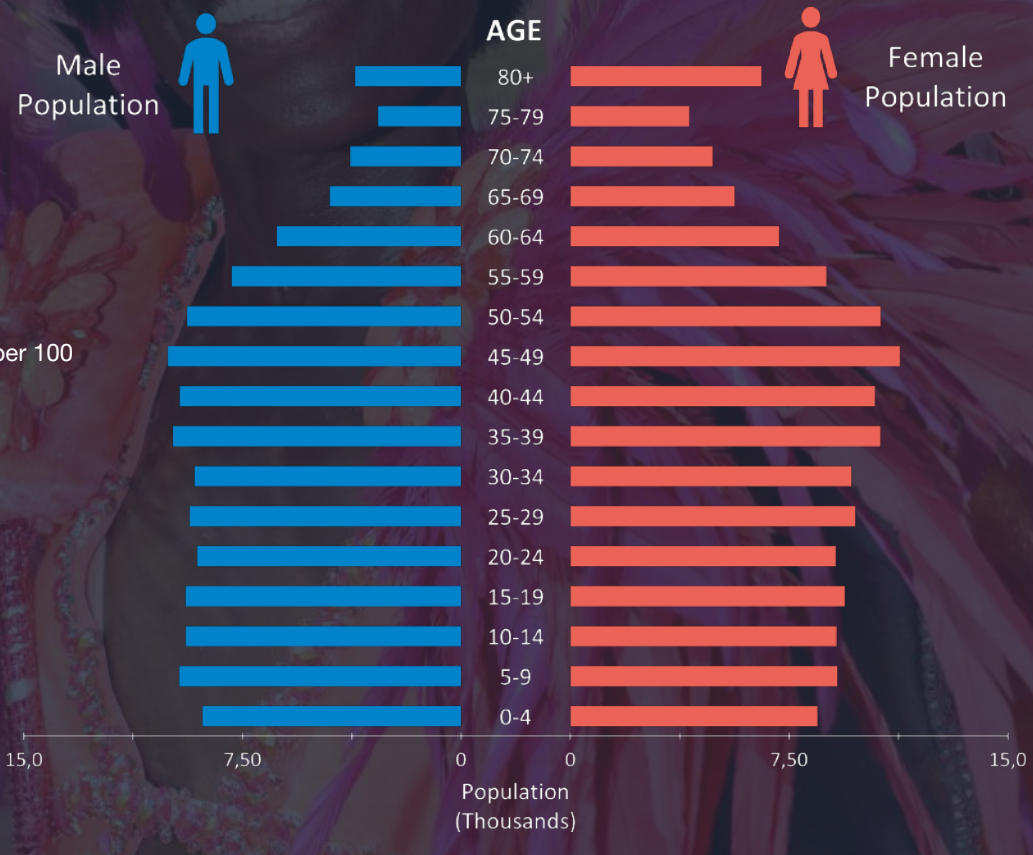
11.3
Infant mortality rate per 1k people

82%
DTP3 immunization coverage of children under age 1

5.66
Hospital beds per 1k people

39
Maternal mortality ratio per 100,000 live births

35.69
New HIV diagnoses rate per 100,000 persons



ECONOMY

40.6% of GDP

Travel and tourism

Primary economic sectors


Tourism


Sugar


Light manufacturing


Component assembly

Labor force participation

80.3%
Services sector

16.9%
Industry

2.8%
Agriculture


$3.7 billion
Gross domestic product (GDP) PPP


$14,816.86
GDP per capita (US$), current international


12%
Nominal GDP decrease


9.1%
Percent indigent


55.3%
Population covered by at least one social protection benefit


19%
Percent of the population in Poverty


62.3%
Labor force participation


14.1%
Unemployment rate


26%
Youth unemployment rate


4.1%
Inflation rate

KEY INFRASTRUCTURE

1
1 main airport (Grantley Adams International Airport, Bridgetown)

1
1 major seaport in Bridgetown (Port of Bridgetown)

2
Marinas

4
Piers

2
Heliports

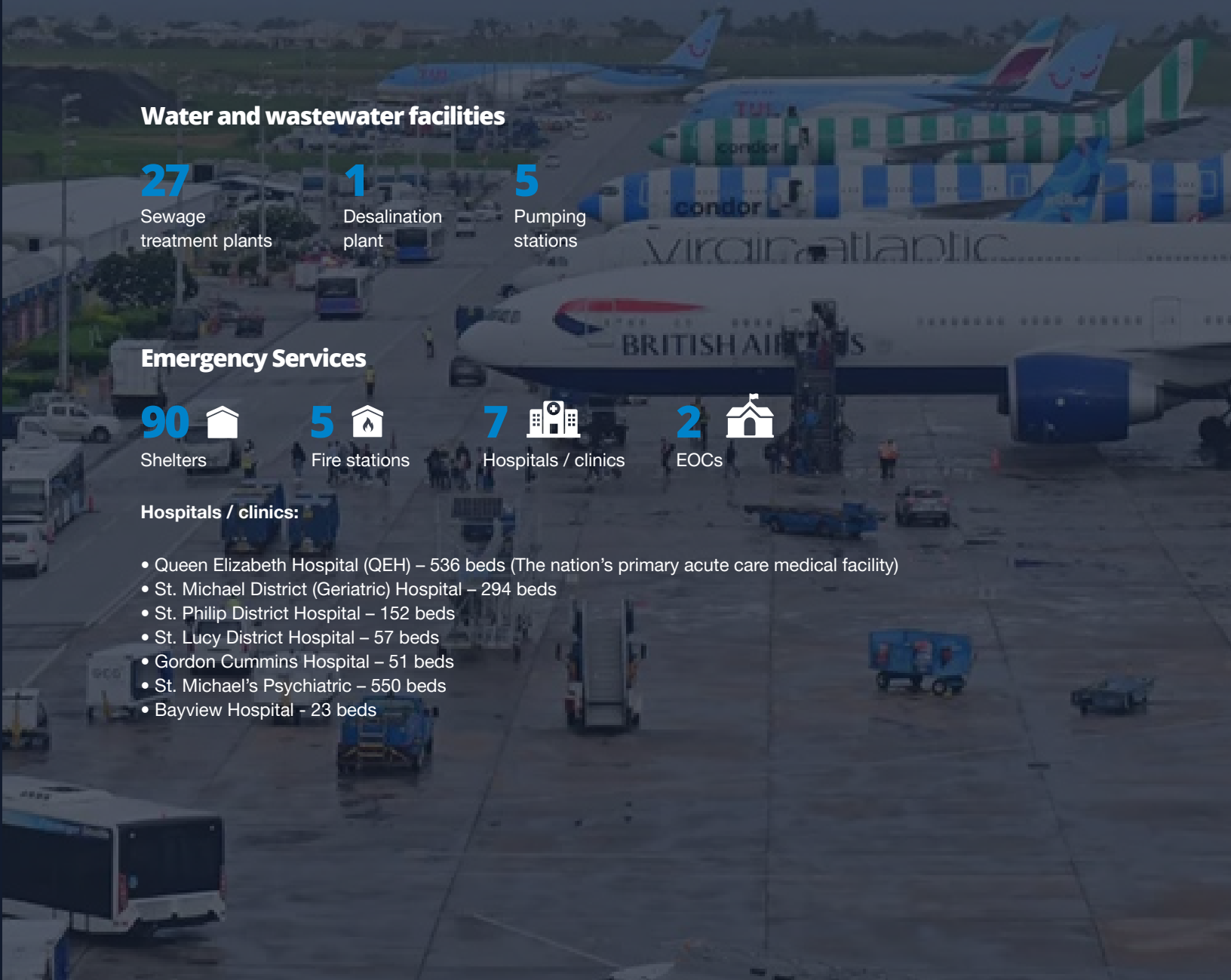
Roads: High road density, but with aging infrastructure. Repairs and upgrades needed.

27
Bridges

9
Communication towers

13
Power plants

3
Submarine cables



Water and wastewater facilities

27
Sewage treatment plants

1
Desalination plant

5
Pumping stations

Emergency Services

90
Shelters

5
Fire stations

7
Hospitals / clinics

2
EOCs

Hospitals / clinics:

- Queen Elizabeth Hospital (QEH) – 536 beds (The nation's primary acute care medical facility)
- St. Michael District (Geriatric) Hospital – 294 beds
- St. Philip District Hospital – 152 beds
- St. Lucy District Hospital – 57 beds
- Gordon Cummins Hospital – 51 beds
- St. Michael's Psychiatric – 550 beds
- Bayview Hospital - 23 beds

DISASTER MANAGEMENT

Major capacity improvements/milestones:

- 2023 Comprehensive Disaster Management Policy
- Roofs To Reef Programme (R2RP)
- Bridgetown Initiative
- Blue Green Bank
- Home Ownership Providing Energy (HOPE) Programme
- Tsunami Ready Programme Achievement
- SMART Hospital Initiative Achievement
- Model Safe Schools Programme Achievement

MAJOR DISASTER IMPACTS

Tropical Cyclone Emily (1987)
Deaths: *
Affected: 230
Losses: $257 million

Tropical Cyclone Lili (2002)
Deaths: *
Affected:2,000
Losses: $325,000

Tropical Cyclone Ivan (2004)
Deaths: 1
Affected: 880
Losses: $7.7 million

Tropical Cyclone Tomas (2010)
Deaths: *
Affected: 2,500
Losses: *

Tropical Cyclone Elsa (2021)
Deaths: *
Affected: 3,300
Losses: *

La Soufriere eruption (2021)
Ashfall affected the whole country. Grantley Adams International Airport in Barbados closed due to the volcanic ash.

THE RVA

RISK AND VULNERABILITY ASSESSMENT RESULTS

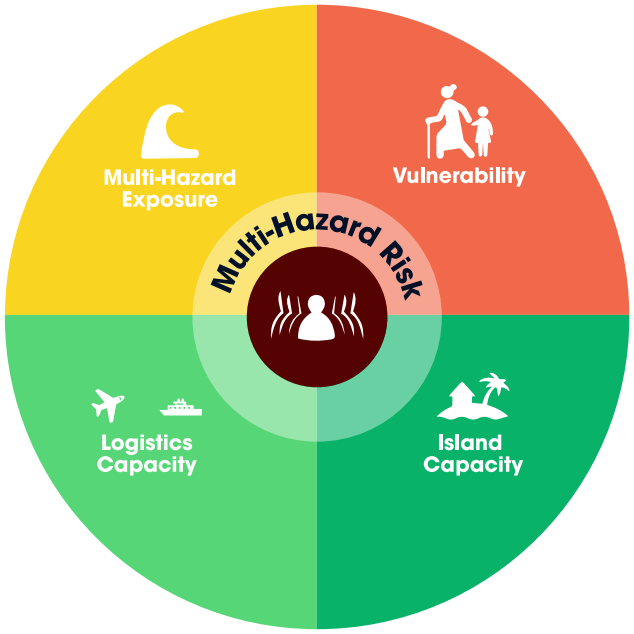
RISK AND VULNERABILITY

ASSESSMENT RESULTS

Provided in this section are the Risk and Vulnerability Assessment (RVA) results conducted by the Pacific Disaster Center as part of the National Disaster Preparedness Baseline Assessment.

For more information about PDC's NDPBA Methodology, please visit: https://www.pdc.org/wp-content/uploads/NDPBA-Data-Sharing-Guide-English-Screen.pdf

BARBADOS



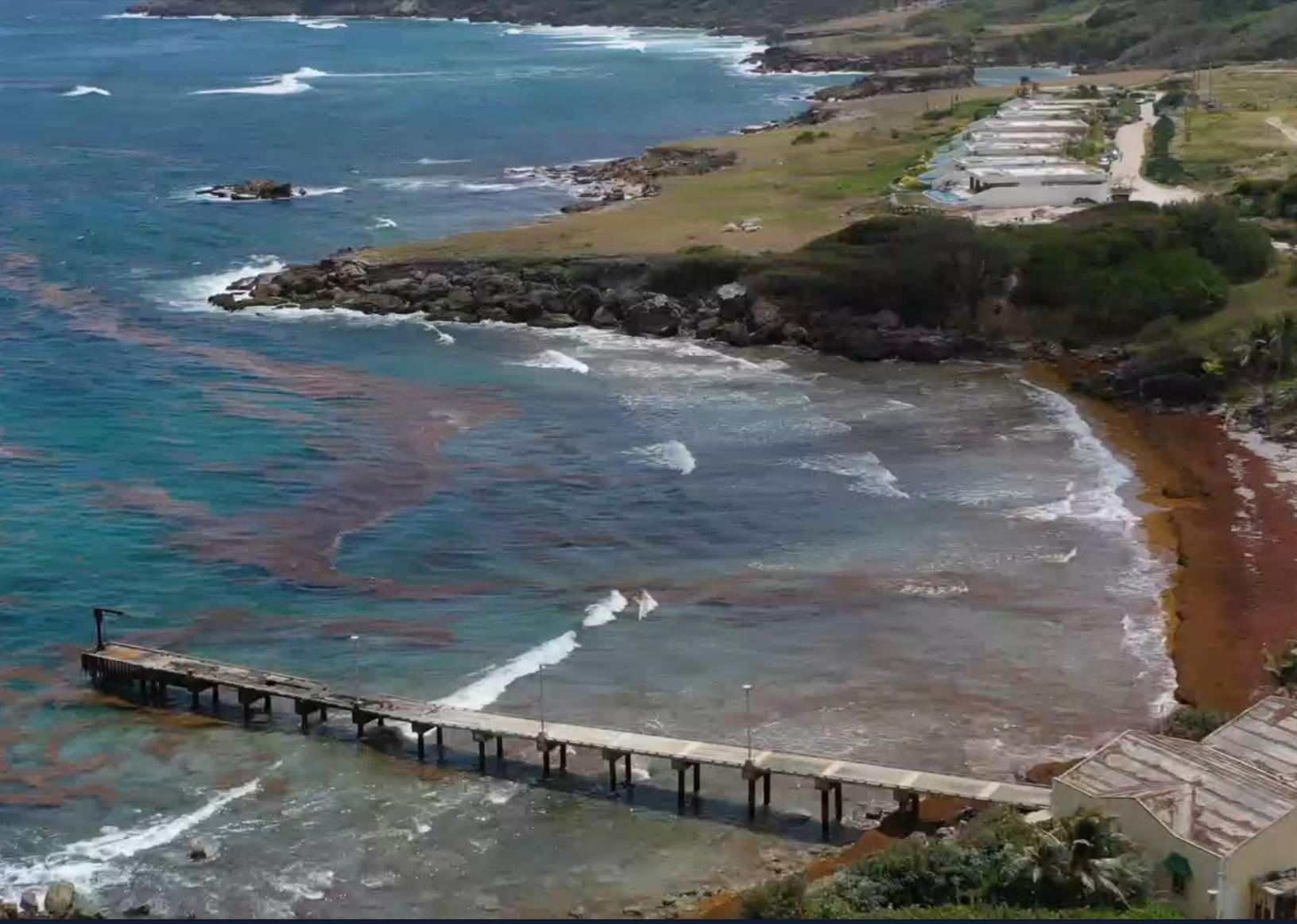
COMPONENTS OF RISK

Multi-Hazard Exposure

Vulnerability

Island Capacity

Logistics Capacity



THE RVA

MULTI-HAZARD EXPOSURE

MULTI-HAZARD EXPOSURE

The following hazards were assessed by PDC as part of the National Disaster Preparedness Baseline Assessment:

Global Multi-hazard Exposure Rank (PDC Global RVA)

113 OUT OF 225 COUNTRIES / TERRITORIES ASSESSED

Climate Exposure 2050 Rank (PDC Regional Climate Assessment)

8 OUT OF 20 COUNTRIES / TERRITORIES ASSESSED

BARBADOS HAZARD ZONES

HURRICANE WINDS

100% Relative Population Exposure

286,260 Raw Population Exposure

Exposed: **100%** Built Environment **100%** Crit. Infrastructure

VOLCANIC ASHFALL

100% Relative Population Exposure

286,260 Raw Population Exposure

Exposed: **100%** Built Environment **100%** Crit.Infrastructure

FLASH FLOOD

40% Relative Population Exposure

113,900 Raw Population Exposure

Exposed: **46%** Built Environment **56%** Crit. Infrastructure

WILDFIRE

9% Relative Population Exposure

25,932 Raw Population Exposure

Exposed: **9%** Built Environment **8%** Crit. Infrastructure

LANDSLIDE

10% Relative Population Exposure

29,360 Raw Population Exposure

Exposed: **11%** Built Environment **10%** Crit. Infrastructure

SEA LEVEL RISE

<1% Relative Population Exposure

2,018 Raw Population Exposure

Exposed: **<1%** Built Environment **17%** Crit. Infrastructure

EARTHQUAKE

100% Relative Population Exposure

286,260 Raw Population Exposure

Exposed: **100%** Built Environment **100%** Crit. Infrastructure

TSUNAMI

2% Relative Population Exposure

5,122 Raw Population Exposure

Exposed: **2%** Built Environment **17%** Crit. Infrastructure

EXTREME HEAT

66% Relative Population Exposure

188,463 Raw Population Exposure

Exposed: **70%** Built Environment **72%** Crit. Infrastructure

COASTAL FLOODING

1% Relative Population Exposure

3,168 Raw Population Exposure

Exposed: **1%** Built Environment **8%** Crit. Infrastructure

Barbados: Hurricane Wind Hazard Exposure

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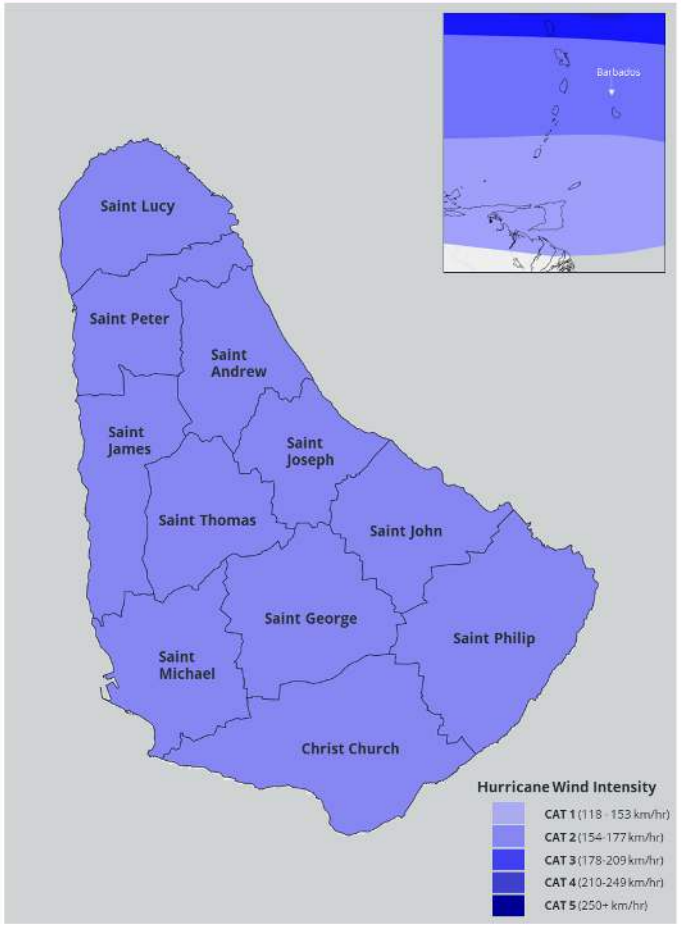
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

286,260 (100%)

People exposed to hurricane force winds of Category 2 and higher

POTENTIAL BUILT ENVIRONMENT EXPOSURE

162,779 (100%)

Built environment exposed to hurricane force winds of Category 2 and higher

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

3 (100%) Airports & Heliports	**10** (100%) Seaports	**128** (100%) Schools & Colleges	**2** (100%) EOCs	**1** (100%) Warehouses	**90** (100%) Shelters	**43** (100%) Hospitals & Clinics
9 (100%) Waste Management	**126** (100%) Hotels & Resorts	**5** (100%) Fire Stations	**15** (100%) Police Stations	**13** (100%) Power Plants	**27** (100%) Bridges	**20** (100%) Senior & Child Care Homes

Barbados: Volcanic Ashfall Hazard Exposure

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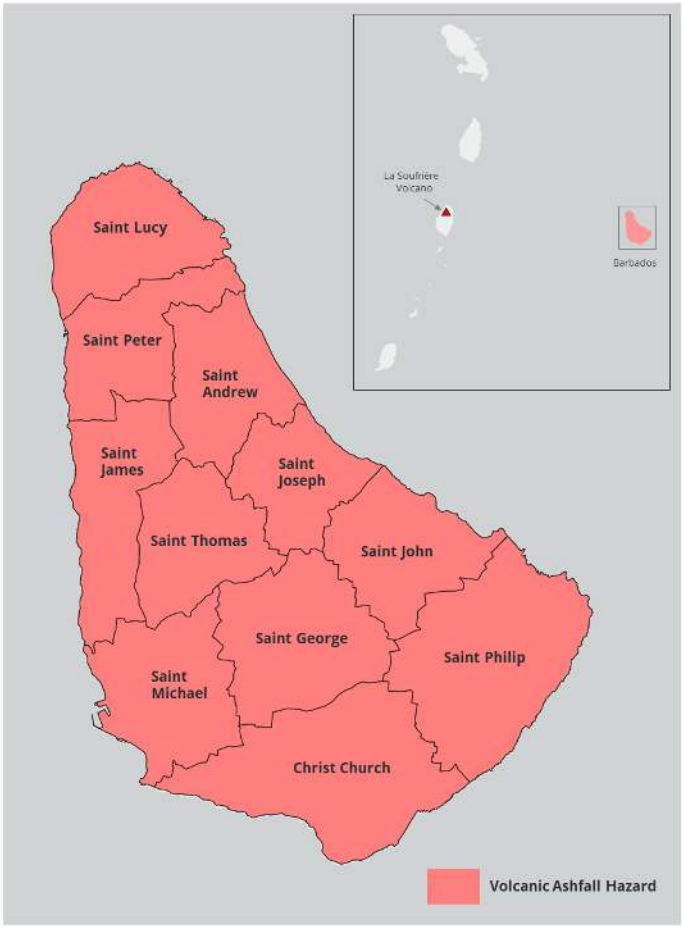
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

286,260 (100%)

People exposed to volcanic ashfall

POTENTIAL BUILT ENVIRONMENT EXPOSURE

162,779 (100%)

Built environment exposed to volcanic ashfall

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

3 (100%) Airports & Heliports	**10** (100%) Seaports	**128** (100%) Schools & Colleges	**2** (100%) EOCs	**1** (100%) Warehouses	**90** (100%) Shelters	**43** (100%) Hospitals & Clinics
9 (100%) Waste Management	**126** (100%) Hotels & Resorts	**5** (100%) Fire Stations	**15** (100%) Police Stations	**13** (100%) Power Plants	**27** (100%) Bridges	**20** (100%) Senior & Child Care Homes

 Population exposure calculated using PDC's All Hazards Impact Model (AIM). Built environment exposure calculated using building footprints (OSM). Data: PDC, Volcanic Ash Advisory Center (VAAC), OurAirports, Sky Vector, World Port Index, Barbados Department of Emergency Management, Barbados Fire Service, Barbados Tourism Marketing Inc., Barbados Light and Power Company, Ministry of Health, CDEMA, GeoCRIS, OHASIS, OpenCellID, HOTOSM, OpenStreetMap, Google Maps.

Barbados: Flash Flood Exposure

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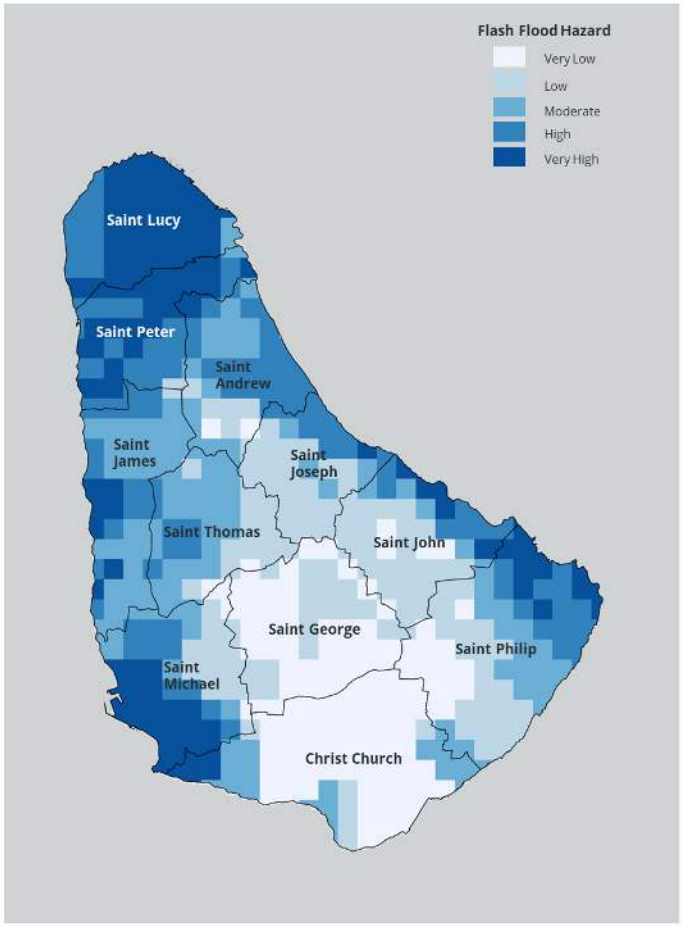
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

113,900 (40%)

People exposed to flash flooding (high and very high)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

74,042 (46%)

Built environment exposed to flash flooding (high and very high)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (67%) Airports & Heliports	**9** (90%) Seaports	**71** (55%) Schools & Colleges	**0** (0%) EOCs	**1** (100%) Warehouses	**36** (40%) Shelters	**33** (77%) Hospitals & Clinics
6 (67%) Waste Management	**75** (60%) Hotels & Resorts	**1** (20%) Fire Stations	**8** (53%) Police Stations	**5** (38%) Power Plants	**23** (85%) Bridges	**8** (40%) Senior & Child Care Homes

Barbados: Wildfire Hazard Exposure

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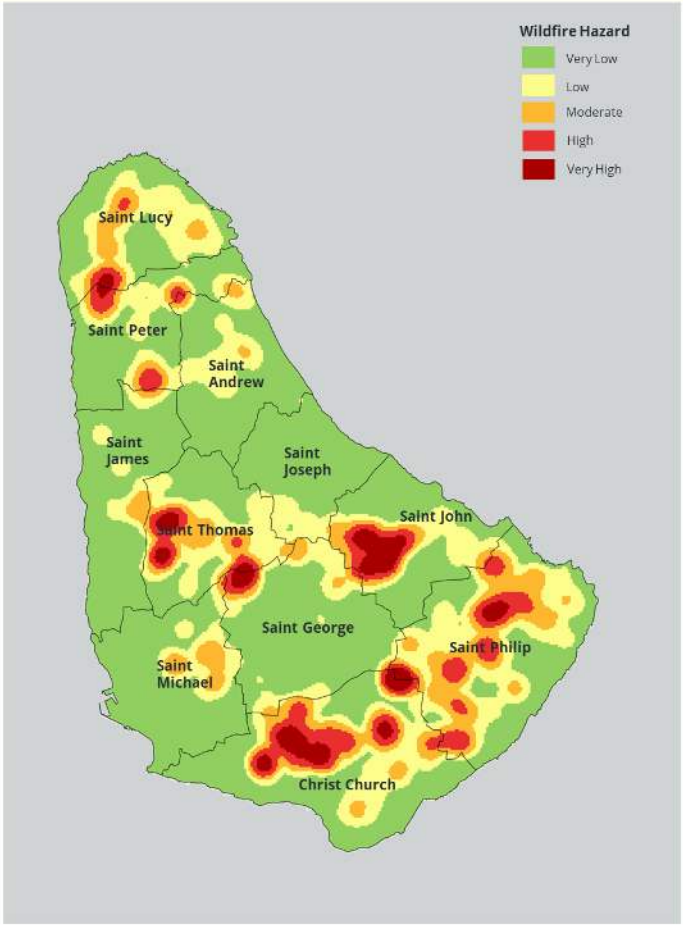
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

25,932 (9%)

People exposed to wildfire (moderate to very high)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

13,949 (9%)

Built environment exposed to wildfire (moderate to very high)

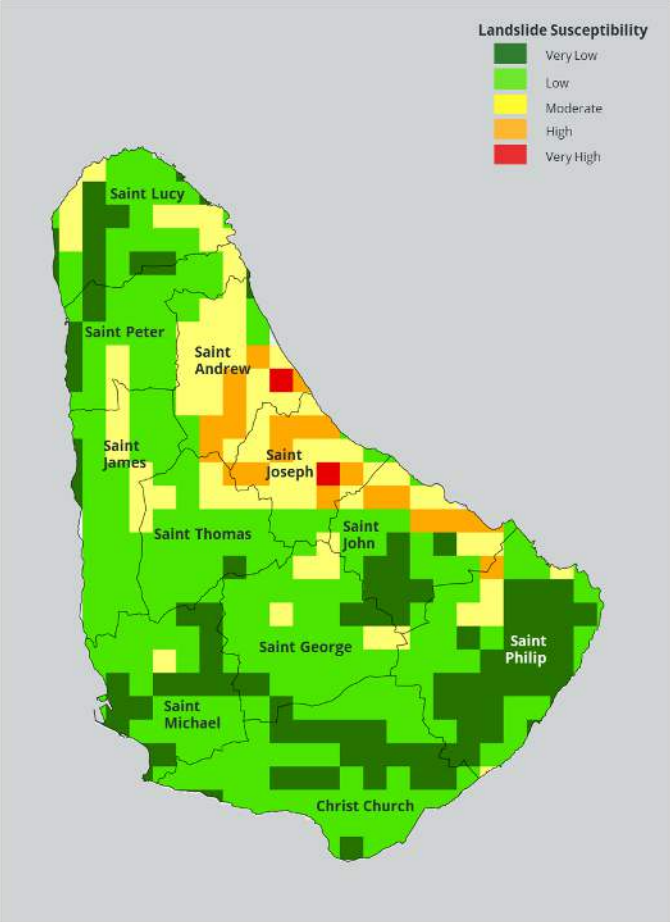
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

0 (0%) Airports & Heliports	0 (0%) Seaports	12 (9%) Schools & Colleges	0 (0%) EOCs	0 (0%) Warehouses	8 (9%) Shelters	3 (7%) Hospitals & Clinics
5 (56%) Waste Management	3 (2%) Hotels & Resorts	1 (20%) Fire Stations	0 (0%) Police Stations	2 (15%) Power Plants	1 (4%) Bridges	2 (10%) Senior & Child Care Homes

Barbados: Landslide Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

29,360 (10%)

People exposed to moderate to very high landslide susceptibility

POTENTIAL BUILT ENVIRONMENT EXPOSURE

18,578 (11%)

Built environment exposed to moderate to very high landslide susceptibility

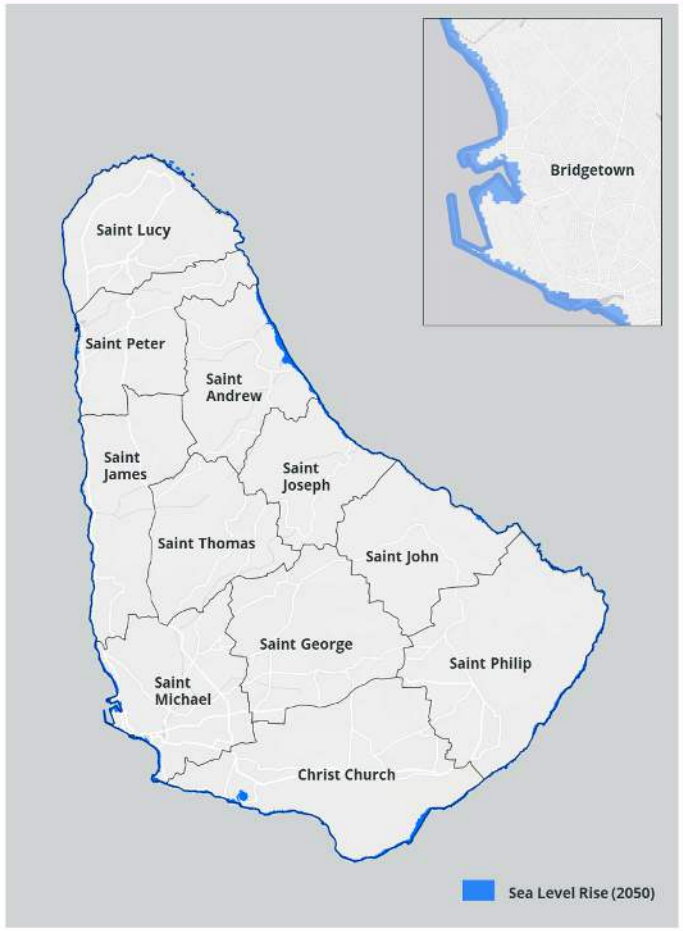
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

0 (0%) Airports & Heliports	**1** (10%) Seaports	**18** (14%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**12** (13%) Shelters	**0** (0%) Hospitals & Clinics
1 (11%) Waste Management	**3** (2%) Hotels & Resorts	**1** (20%) Fire Stations	**2** (13%) Police Stations	**2** (15%) Power Plants	**12** (44%) Bridges	**2** (10%) Senior & Child Care Homes

Barbados: Sea Level Rise Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

2,018 (<1%)

People exposed to sea level rise by 2050

POTENTIAL BUILT ENVIRONMENT EXPOSURE

1,464 (<1%)

Built environment exposed to sea level rise by 2050

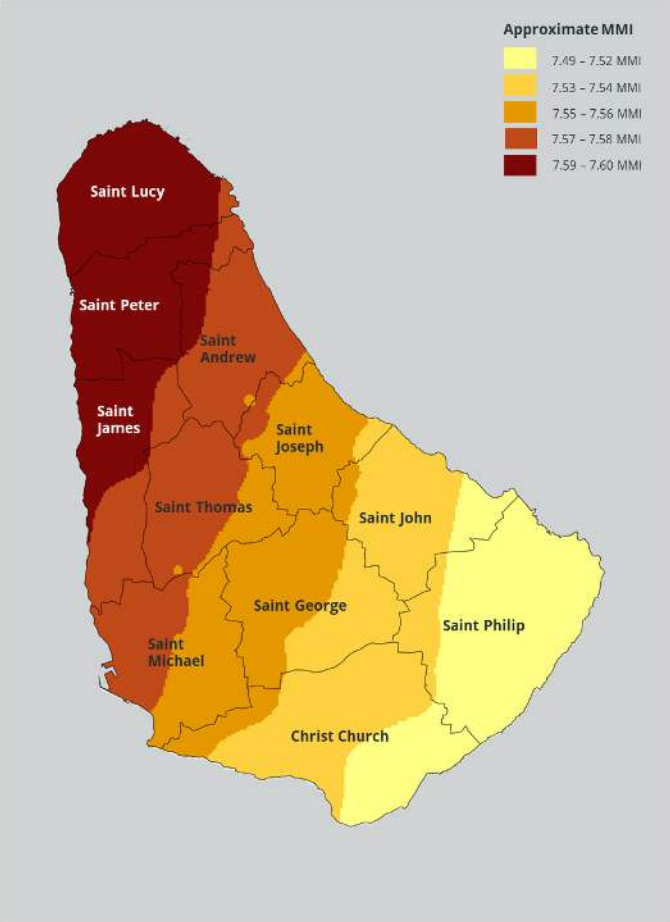
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (67%) Airports & Heliports	**10** (100%) Seaports	**1** (<1%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**0** (0%) Shelters	**1** (2%) Hospitals & Clinics
0 (0%) Waste Management	**64** (51%) Hotels & Resorts	**0** (0%) Fire Stations	**3** (20%) Police Stations	**2** (15%) Power Plants	**2** (7%) Bridges	**3** (20%) Fuel Terminals & Storage

Barbados: Earthquake Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

286,260 (100%)

People exposed to earthquakes of an estimated MMI VII and above

POTENTIAL BUILT ENVIRONMENT EXPOSURE

162,779 (100%)

Built environment exposed to earthquakes of an estimated MMI VII and above

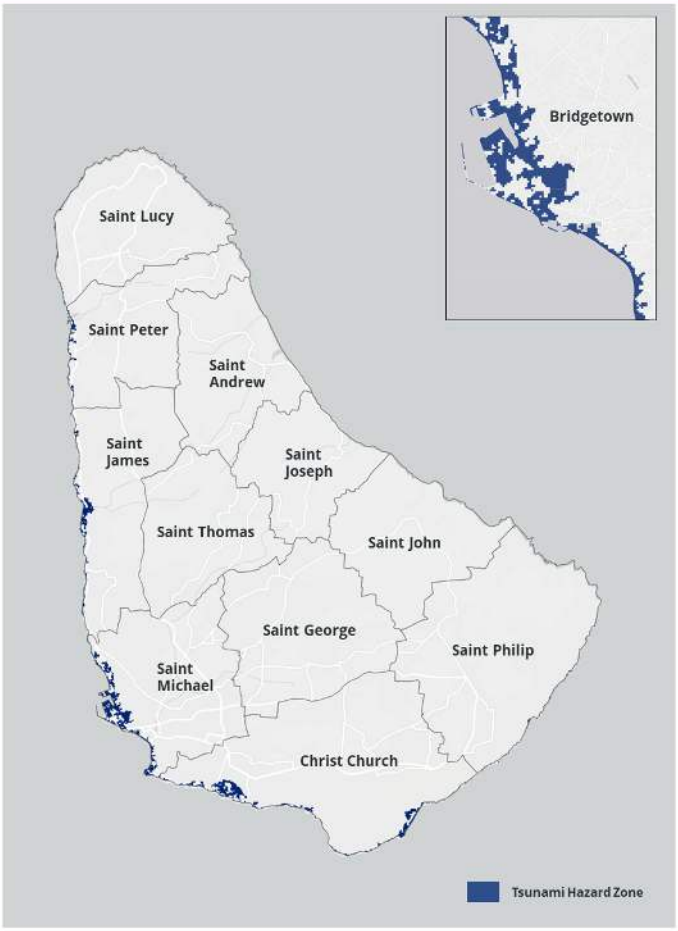
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

3 (100%) Airports & Heliports	**10** (100%) Seaports	**128** (100%) Schools & Colleges	**2** (100%) EOCs	**1** (100%) Warehouses	**90** (100%) Shelters	**43** (100%) Hospitals & Clinics
9 (100%) Waste Management	**126** (100%) Hotels & Resorts	**5** (100%) Fire Stations	**15** (100%) Police Stations	**13** (100%) Power Plants	**27** (100%) Bridges	**20** (100%) Senior & Child Care Homes

Barbados: Tsunami Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

5,122 (2%)
People exposed to tsunami

POTENTIAL BUILT ENVIRONMENT EXPOSURE

2,944 (2%)
Built environment exposed to tsunami

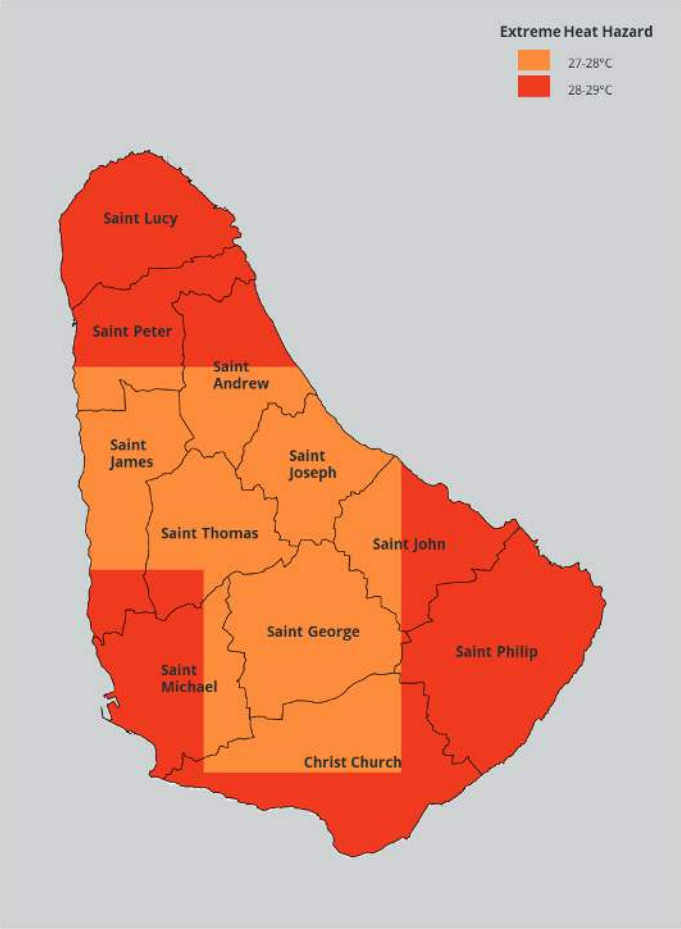
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (67%) Airports & Heliports	**8** (80%) Seaports	**1** (<1%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**1** (1%) Shelters	**6** (14%) Hospitals & Clinics
0 (0%) Waste Management	**55** (44%) Hotels & Resorts	**1** (20%) Fire Stations	**2** (13%) Police Stations	**3** (23%) Power Plants	**4** (15%) Bridges	**6** (40%) Fuel Terminals & Storage

Barbados: Extreme Heat Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

188,463 (66%)

People exposed to extreme heat (28°C and above)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

114,011 (70%)

Built environment exposed to extreme heat (28°C and above)

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

3 (100%)	**10** (100%)	**93** (73%)	**1** (50%)	**1** (100%)	**64** (71%)	**37** (86%)
Airports & Heliports	Seaports	Schools & Colleges	EOCs	Warehouses	Shelters	Hospitals & Clinics
2 (22%)	**86** (68%)	**3** (60%)	**11** (73%)	**8** (61%)	**19** (70%)	**17** (85%)
Waste Management	Hotels & Resorts	Fire Stations	Police Stations	Power Plants	Bridges	Senior & Child Care Homes

Barbados: Coastal Flooding Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE

POTENTIAL POPULATION EXPOSURE

3,168 (1%)
People exposed to coastal flooding

POTENTIAL BUILT ENVIRONMENT EXPOSURE

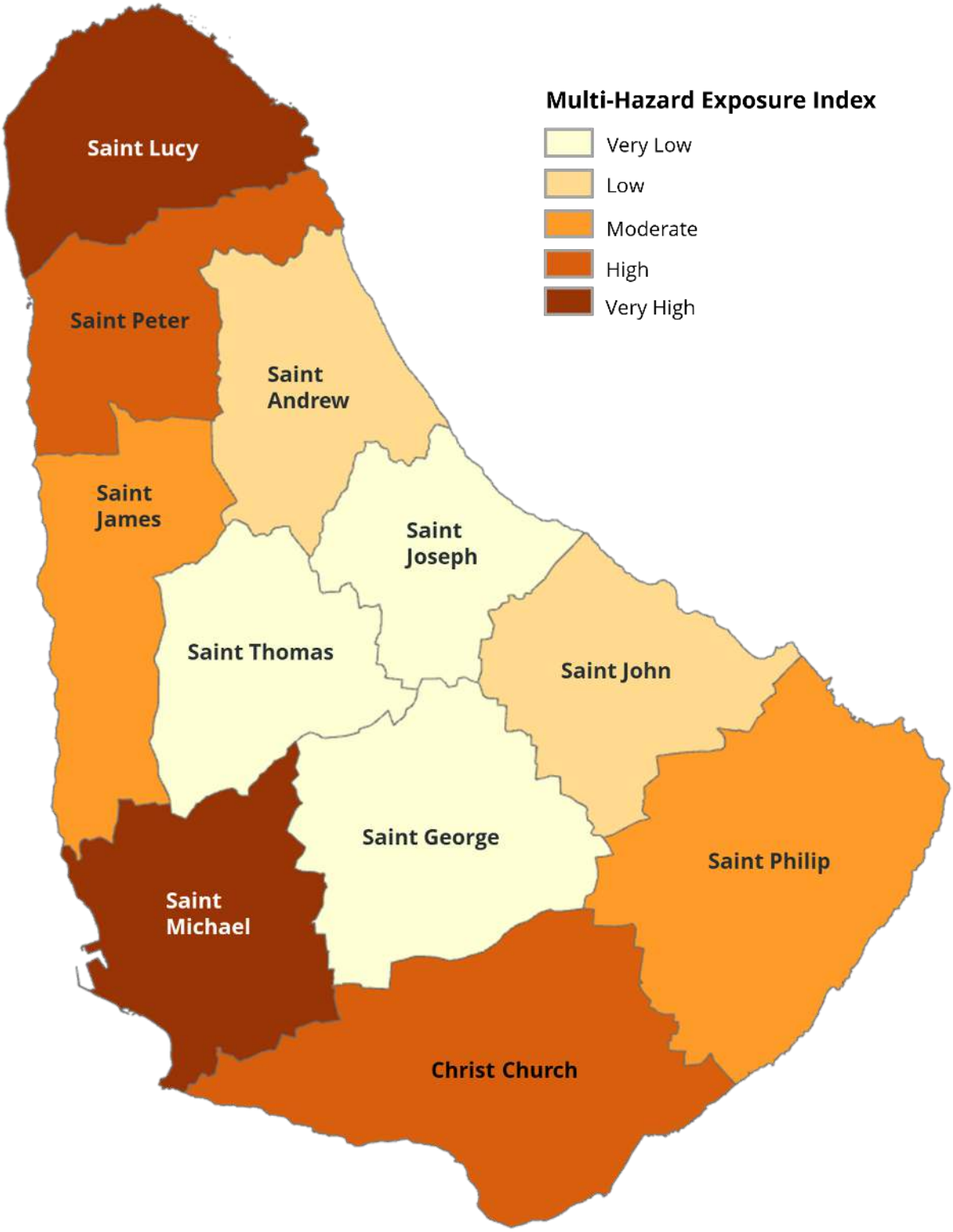
2,135 (1%)
Built environment exposed to coastal flooding

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (67%) Airports & Heliports	**10** (100%) Seaports	**1** (<1%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**0** (0%) Shelters	**1** (2%) Hospitals & Clinics
0 (0%) Waste Management	**69** (55%) Hotels & Resorts	**0** (0%) Fire Stations	**3** (20%) Police Stations	**2** (15%) Power Plants	**2** (7%) Bridges	**5** (33%) Fuel Terminals & Storage

MULTI-HAZARD EXPOSURE BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint Michael	0.842
	2	Saint Lucy	0.557
HIGH	3	Christ Church	0.525
	4	Saint Peter	0.503
MODERATE	5	Saint Philip	0.447
	6	Saint James	0.361
LOW	7	Saint John	0.350
	8	Saint Andrew	0.345
VERY LOW	9	Saint Joseph	0.229
	10	Saint Thomas	0.180
	11	Saint George	0.038


Multi-Hazard Exposure Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

VULNERABILITY

VULNERABILITY

Vulnerability measures the physical, environmental, social, and economic conditions and processes that increase susceptibility of communities and systems to the damaging effects of hazards. Vulnerability data is designed to capture the multi-dimensional nature of poverty, the inequality in access to resources due to gender, and the ability of a given area to adequately support the population. In coordination with stakeholders, the following indicators were selected to measure vulnerability subcomponents in the country. Breaking down each vulnerability subcomponent to the indicator level allows users to identify the key drivers of vulnerability to support risk reduction efforts and policy decisions.

Global Vulnerability Rank (PDC Global RVA)

168 OUT OF 178 COUNTRIES / TERRITORIES ASSESSED

VULNERABILITY SUBCOMPONENTS AND INDICATORS

Information Access Vulnerability
Primary School Attendance Rate
Secondary School Attendance Rate
Household Access to TV
Household Access to Radio

Environmental Stress
Coastline Exposure to Local/Global Threats
Forest Loss

Clean Water Access Vulnerability
Households with Unimproved Sanitation Facilities
Household Water Source Not Piped into Dwelling

Household and Transportation Vulnerability
Household Overcrowding
Housing Built Prior to 1991
Household Vehicle Access

Economic Constraints
Economic Dependency Ratio
Poverty Rate
GINI Coefficient

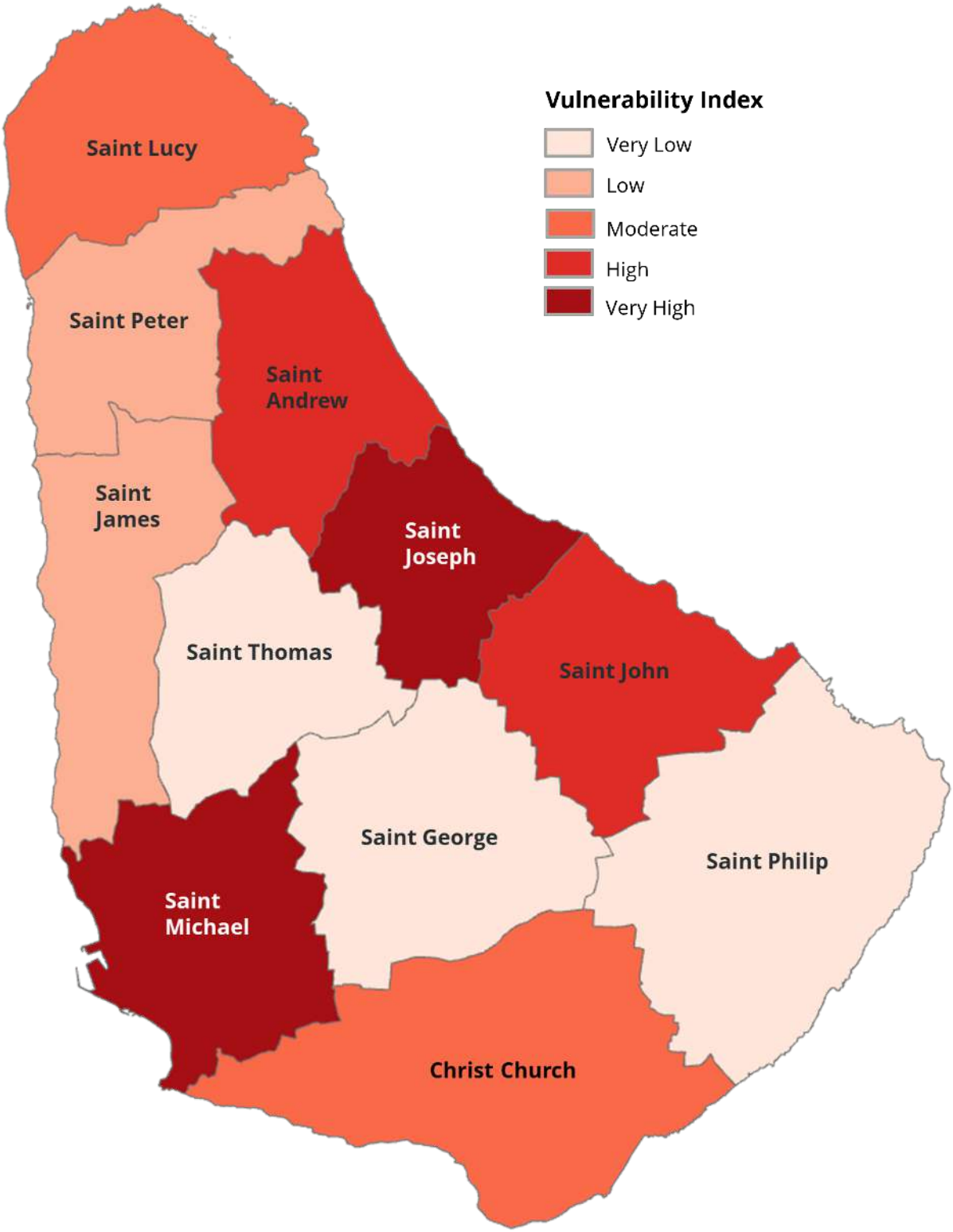
Gender Inequality
Female to Male Labor Ratio
Parity in Secondary Education Attendance

Household Composition and Vulnerable Health
Population Aged 65 and Older
Population Under Age 18
Prevalence of Disability

Population Pressures
Average Annual Population Change
Population Density

VULNERABILITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint Michael	0.596
	2	Saint Joseph	0.594
HIGH	3	Saint Andrew	0.535
	4	Saint John	0.530
MODERATE	5	Saint Lucy	0.525
	6	Christ Church	0.392
LOW	7	Saint Peter	0.388
	8	Saint James	0.277
VERY LOW	9	Saint George	0.245
	10	Saint Philip	0.232
	11	Saint Thomas	0.225


Vulnerability Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

ISLAND CAPACITY

ISLAND CAPACITY

Island Capacity represents the societal and institutional resources that islands can leverage and mobilize to prepare for and bear disaster impacts.

ISLAND CAPACITY SUBCOMPONENTS AND INDICATORS

Environmental Capacity
Protected Area
Protected Coastlines
Net Carbon Flux
Croplands

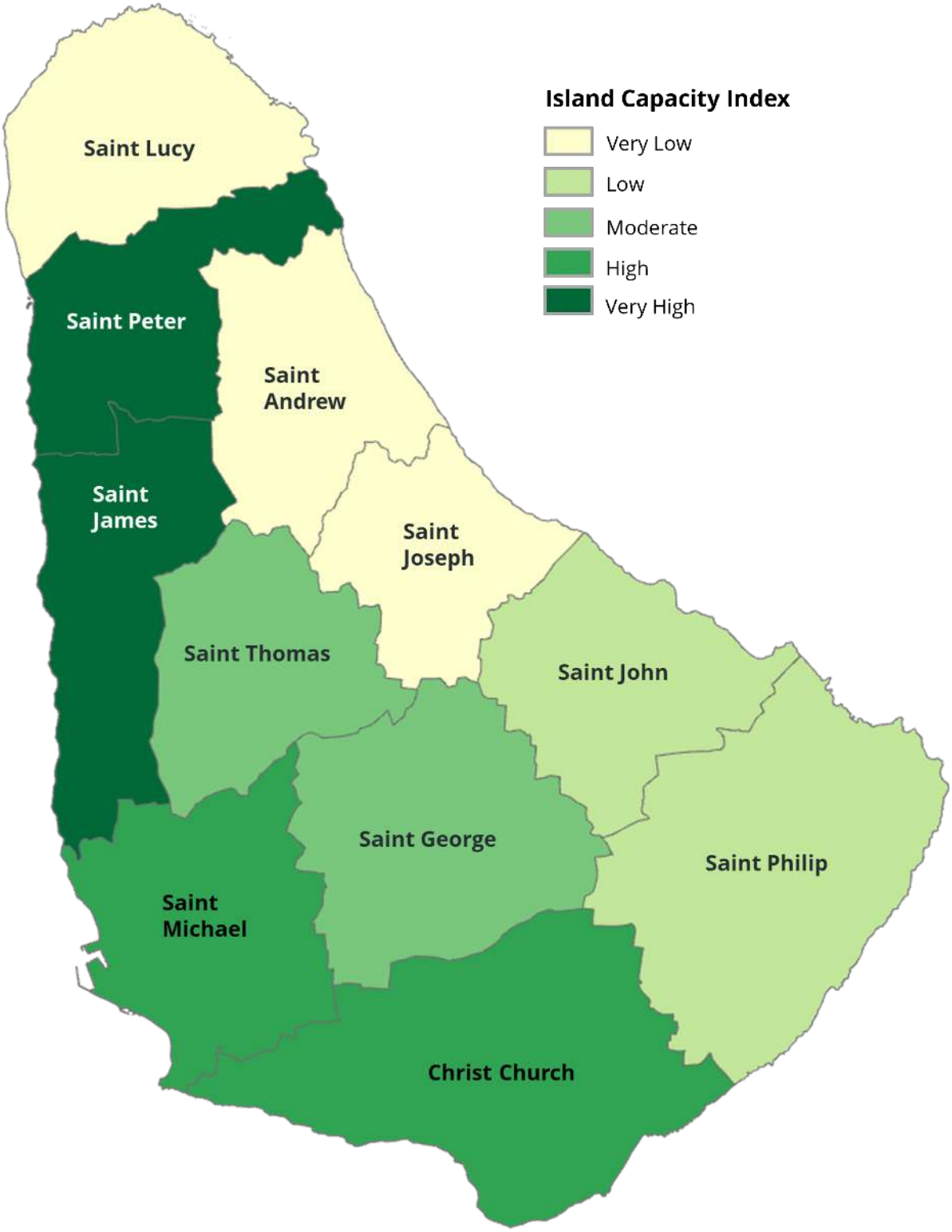
Communications Capacity
Households with Fixed Phones
Households with Computer
Households with Internet Access

Energy Capacity
Households with Electric Lighting
Households Using Gas for Cooking

Emergency Services and Health Care Capacity
Average Distance to Police Station
Average Distance to Fire Station
Average Distance to Hospital or Clinic
Average Distance to Shelter
Hospitals and Clinics per 10,000 Persons

ISLAND CAPACITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint James	0.626
	2	Saint Peter	0.581
HIGH	3	Christ Church	0.569
	4	Saint Michael	0.554
MODERATE	5	Saint Thomas	0.544
	6	Saint George	0.522
LOW	7	Saint Philip	0.516
	8	Saint John	0.395
VERY LOW	9	Saint Joseph	0.325
	10	Saint Andrew	0.296
	11	Saint Lucy	0.282


Island Capacity Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

LOGISTICS CAPACITY

LOGISTICS CAPACITY

Logistics Capacity assesses the ability of the country to ensure efficient storage, movement, and delivery of resources key to effective humanitarian assistance and disaster relief operations.

LOGISTICS CAPACITY SUBCOMPONENTS AND INDICATORS

Maritime Logistics
Average Distance to Seaport
Ports per km of Coastline
Distance to External Medium or Large Seaport

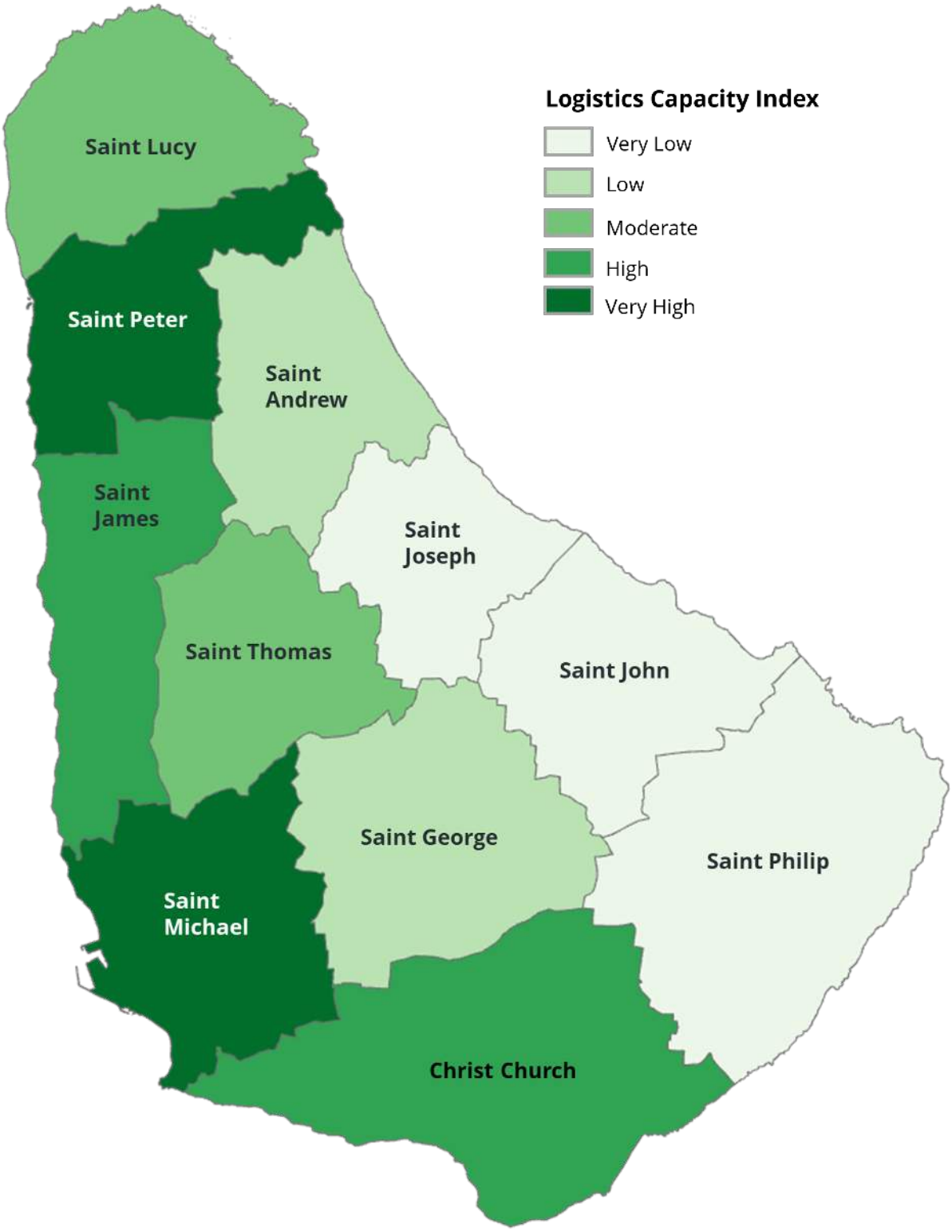
Air Support
Average Distance to Airport or Heliport
Distance to External C130 Airport

Transportation Capacity
Road Density
Gas Stations per 1,000 Persons

Warehouse Access
Average Distance to Warehouse
Distance to CDEMA Sub-Regional Focal Point

LOGISTICS CAPACITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint Michael	0.821
	2	Saint Peter	0.603
HIGH	3	Saint James	0.578
	4	Christ Church	0.574
MODERATE	5	Saint Thomas	0.449
	6	Saint Lucy	0.444
LOW	7	Saint Andrew	0.420
	8	Saint George	0.419
VERY LOW	9	Saint Philip	0.352
	10	Saint John	0.339
	11	Saint Joseph	0.215


Logistics Capacity Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

COPING CAPACITY

COPING CAPACITY

Coping Capacity measures the systems, means, and abilities of people and societies to absorb and respond to disruptions in normal function. Coping Capacity was calculated by using a combination of Island Capacity and Logistics Capacity.

Global Coping Capacity Rank (PDC Global RVA)

51 OUT OF 177 COUNTRIES / TERRITORIES ASSESSED

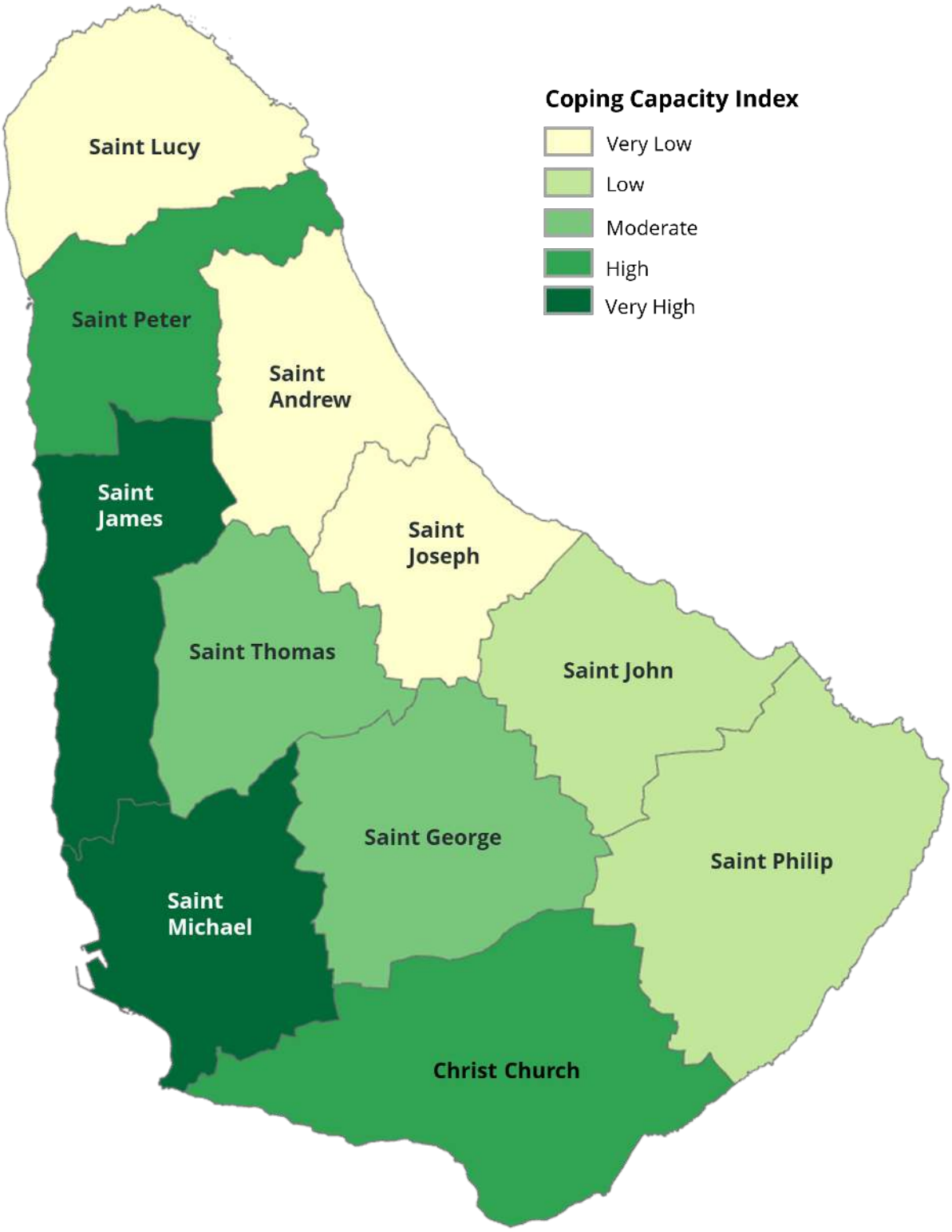
COPING CAPACITY COMPONENTS

Island Capacity

Logistics Capacity

COPING CAPACITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint Michael	0.688
	2	Saint James	0.602
HIGH	3	Saint Peter	0.592
	4	Christ Church	0.571
MODERATE	5	Saint Thomas	0.496
	6	Saint George	0.470
LOW	7	Saint Philip	0.434
	8	Saint John	0.367
VERY LOW	9	Saint Lucy	0.363
	10	Saint Andrew	0.358
	11	Saint Joseph	0.270


Coping Capacity Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

RESILIENCE

RESILIENCE

Resilience was calculated by averaging Vulnerability and Coping Capacity. Results are displayed for Barbados below, while the main drivers of resilience and recommendations are provided in the detailed subnational profiles.

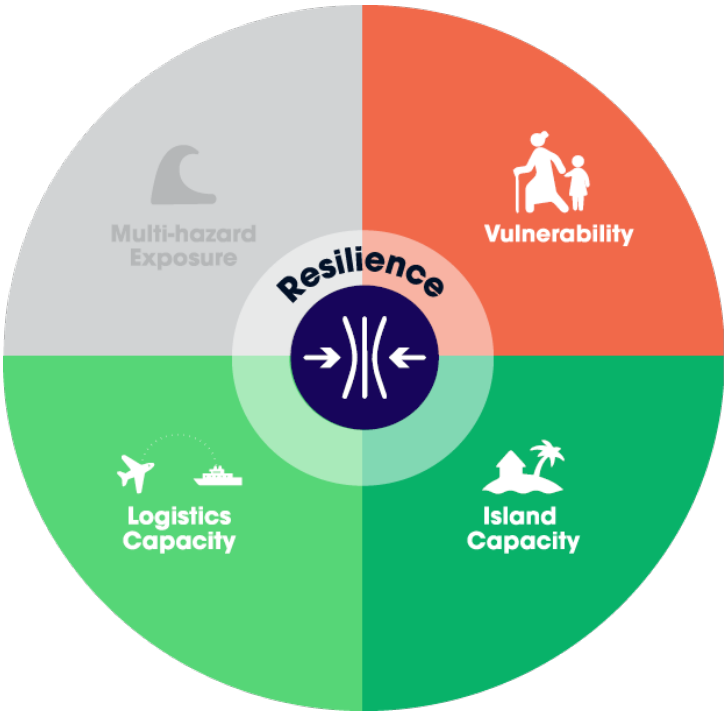
Global Resilience Rank (PDC Global RVA)

40 OUT OF 171 COUNTRIES / TERRITORIES ASSESSED

Climate Resilience Rank (PDC Regional Climate Assessment)

1 OUT OF 15 COUNTRIES

RESILIENCE COMPONENTS



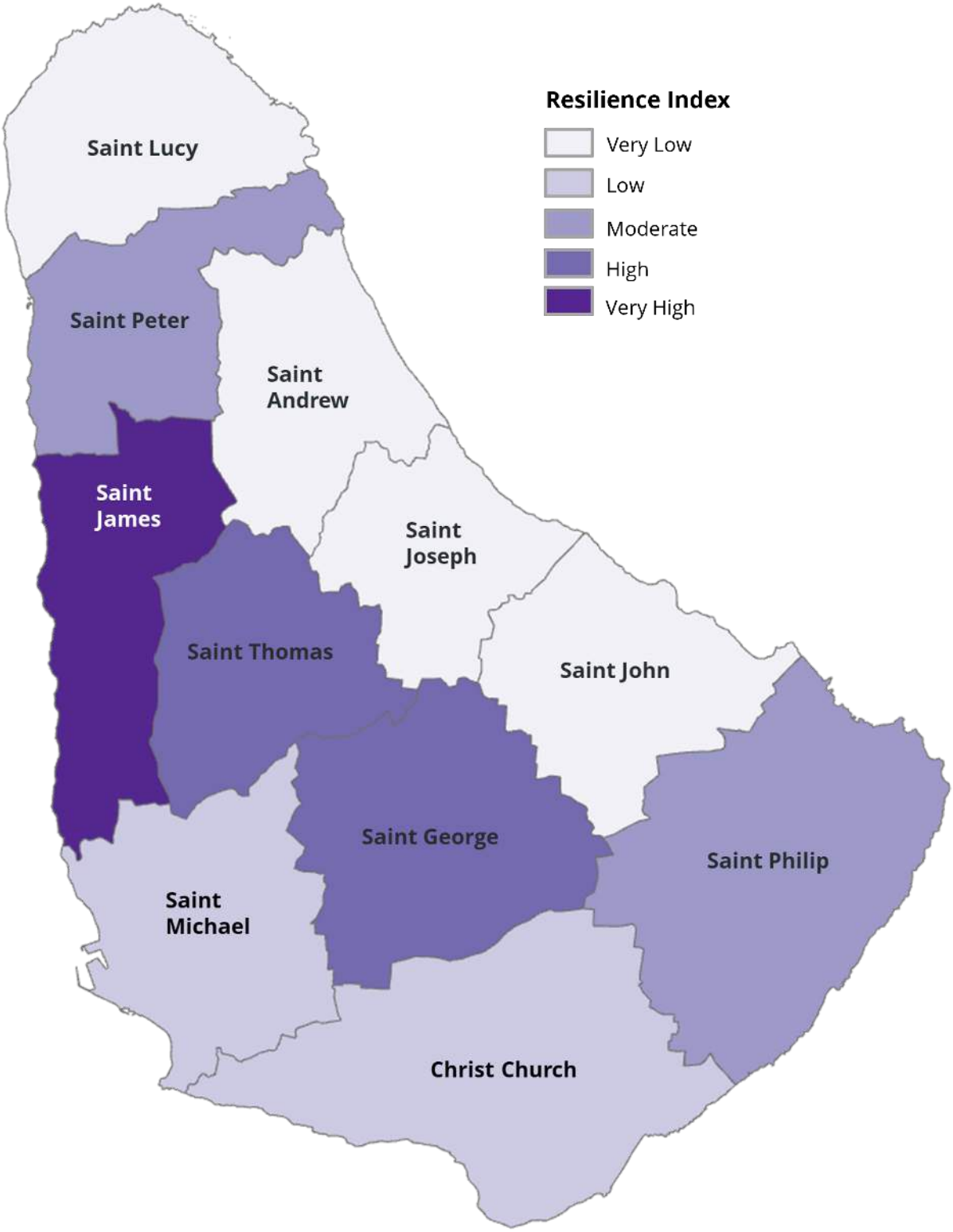
Vulnerability

Island Capacity

Logistics Capacity

RESILIENCE BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint James	0.663
HIGH	2	Saint Thomas	0.636
	3	Saint George	0.612
MODERATE	4	Saint Peter	0.602
	5	Saint Philip	0.601
LOW	6	Christ Church	0.590
	7	Saint Michael	0.546
VERY LOW	8	Saint John	0.419
	8	Saint Lucy	0.419
	10	Saint Andrew	0.411
	11	Saint Joseph	0.338


Resilience Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE RVA

MULTI-HAZARD RISK

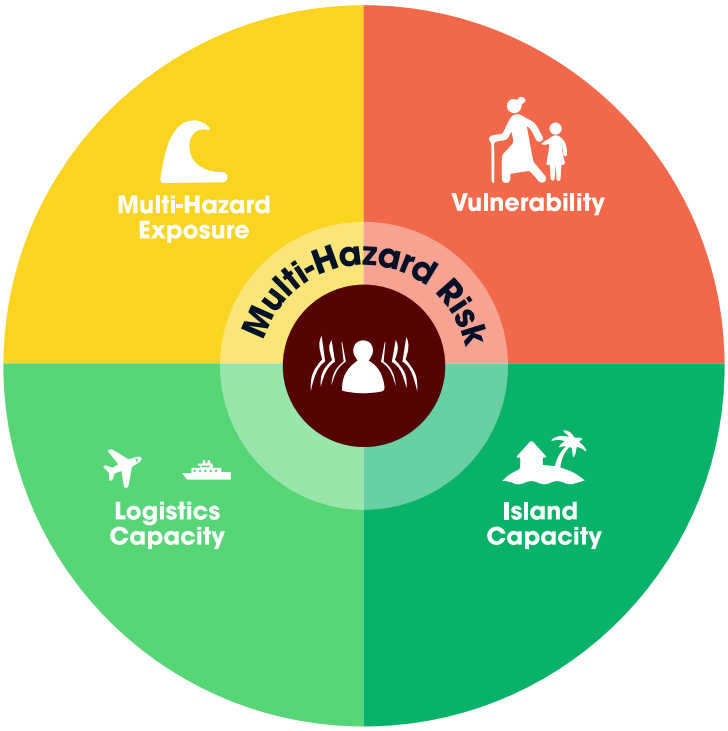
MULTI-HAZARD RISK

Multi-hazard risk combines hazard exposure, susceptibility to impact, and the relative inability to absorb negative disaster impacts to provide a collective measure of how each parish may be affected by hazards and disasters as a whole over time. Analyzing risk information throughout all phases of disaster management – mitigation, preparedness, response, recovery – improves operations and promotes efficient resource allocation.

Multi-Hazard Risk was calculated by averaging Multi-Hazard Exposure, Vulnerability, and Coping Capacity. Results are displayed below, while additional detailed analysis of risk is provided in the subnational profiles report.

Global Multi-Hazard Risk Rank (PDC Global RVA) **133** **OUT OF 171 COUNTRIES / TERRITORIES ASSESSED**

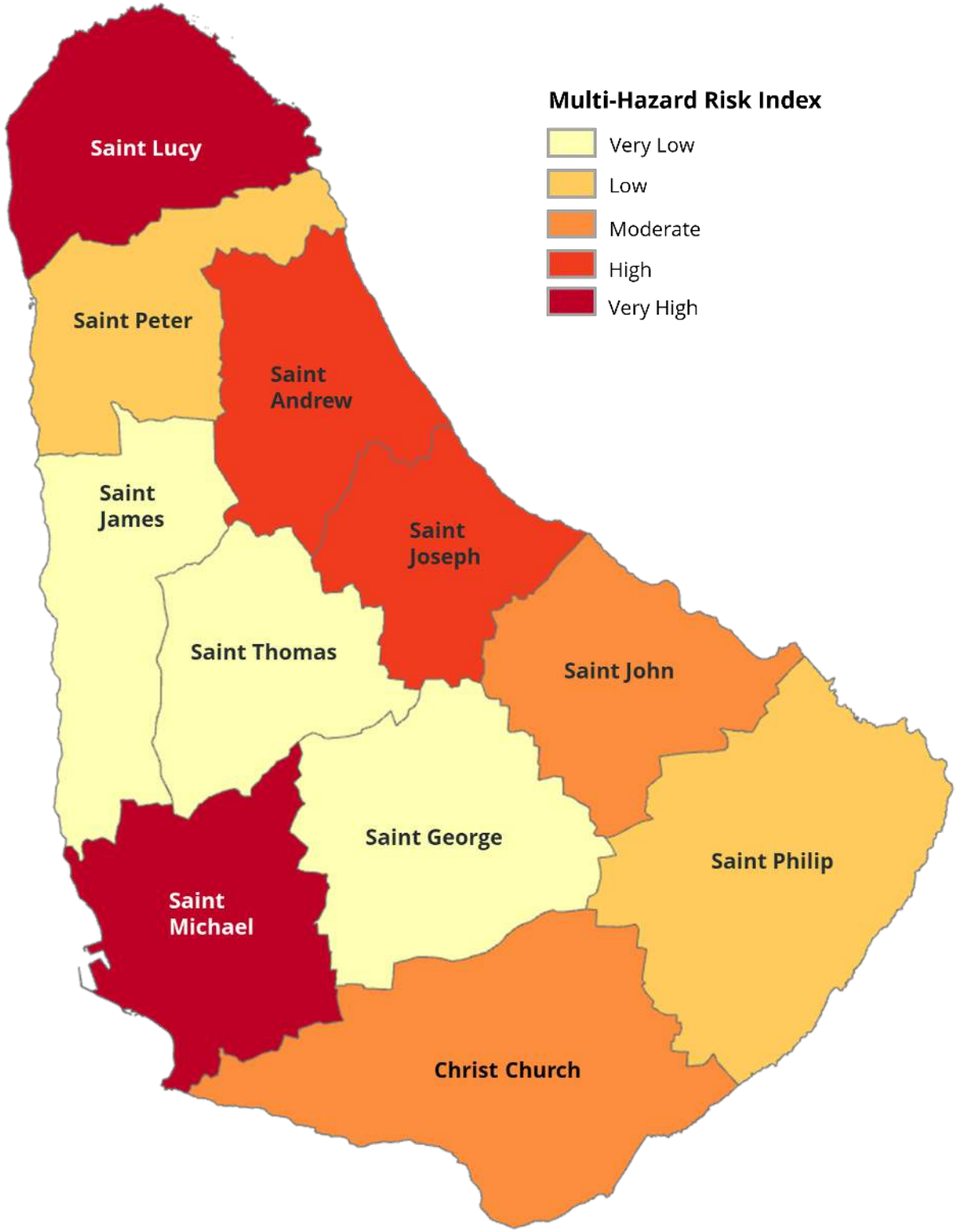
MULTI-HAZARD RISK COMPONENTS



Multi-Hazard Exposure **Vulnerability** **Island Capacity** **Logistics Capacity**

MULTI-HAZARD RISK BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint Michael	0.584
	2	Saint Lucy	0.573
HIGH	3	Saint Joseph	0.517
	4	Saint Andrew	0.507
MODERATE	5	Saint John	0.504
	6	Christ Church	0.448
LOW	7	Saint Peter	0.433
	8	Saint Philip	0.415
VERY LOW	9	Saint James	0.345
	10	Saint Thomas	0.303
	11	Saint George	0.271


Multi-Hazard Risk Index
Very Low
Low
Moderate
High
Very High
Saint Lucy
Saint Peter
Saint Andrew
Saint James
Saint Joseph
Saint Thomas
Saint John
Saint George
Saint Philip
Saint Michael
Christ Church

THE DMA

DISASTER MANAGEMENT ANALYSIS

SUMMARY OF FINDINGS

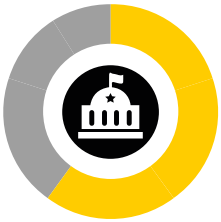
DISASTER MANAGEMENT ANALYSIS

Provided in this section are the results of the Disaster Management Analysis (DMA) conducted as part of the Barbados National Disaster Preparedness Baseline Assessment. The recommendations presented as part of this analysis support opportunities to enable more effective prioritization of risk-reduction and resilience-building initiatives and investments.

Considering diverse operational successes and barriers, the DMA examined six core disaster management themes: Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management.

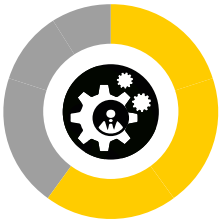
DISASTER MANAGEMENT ANALYSIS RESULTS

DISASTER MANAGEMENT ANALYSIS THEME AND SUBTHEMES



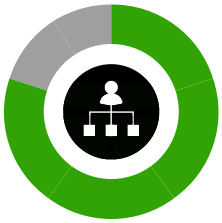
A. Enabling Environment

Legal Instruments
Financial Resources
Strategies
Public Confidence and Political Support
Attitudes and Experience



D. Capabilities and Resources

Dedicated Facilities and Equipment
Human Resources
Inventory of Commodities and Supplies
Targeted Functional Capabilities

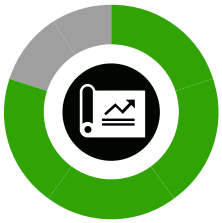


B. Institutional Arrangements

Organizational Structures
Leadership Arrangements
Mechanisms for Stakeholder Engagement

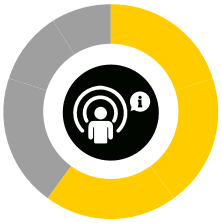
E. Capacity Development

Capacity Development Plans and Strategies
Training and Education Programs and Facilities
Monitoring and Evaluation Processes and Systems



C. Disaster Governance Mechanisms

Plans and Processes
Command, Control, and Coordination Systems
Emergency Operations Centers



F. Communication and Information Management

Hazard and Risk Analysis Systems
Monitoring and Notifications
Disaster Assessment
Information Collection, Management, and Distribution
Media and Public Affairs

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

DISASTER MANAGEMENT ANALYSIS RESULTS

Barbados has established leadership in comprehensive planning and disaster management (DM), forging a united alliance between the government, public, and private sectors to utilize novel strategies that achieve longstanding objectives of building a robust and healthy nation. Barbados has effectively advanced capabilities and capacities with noteworthy achievements especially in enabling environment, institutional arrangements, resource mobilization, and monitoring and evaluation. Recognizing the significance of a collaborative approach, the country's DM community acknowledges the importance of shared responsibility, outlining a vision and goal that is both responsive and adaptable as well as aligned strategically with international and regional commitments.

As Barbados continues to adapt to environmental challenges and enhances it preparedness, several key plans are playing a pivotal role in addressing the imminent impacts of climate change while simultaneously shaping the future of Barbados. These include the 2023 Comprehensive Disaster Management Policy, Updated Physical Development Plan for Barbados, the Integrated Coastal Zone Management Plan (ICZM), Barbados National Strategic Plan, and the National Climate Change Policy Framework. This integrated planning and policy cohesion reflect the nation's dedication to fostering resilience. Additionally, it demonstrates a forward-thinking commitment and a whole-of-country approach to both the environmental sustainability and the well-being of the Barbadian population. Furthermore, these documents are serving as exemplary models throughout the Caribbean region, offering a blueprint to DM agencies for effective coastal management, ecosystem preservation, and safeguarding the nations that are most susceptible to the adverse effects of climate change.

Barbados has provided a platform for community resilience through investment in projects and programs that aim to implement sustainable development and ecosystems throughout the country. The Roofs to Reef Programme (R2RP) is a gold standard initiative that highlights the need for building disaster-resilient homes, decreasing land-based pollution, enhancing renewable energy generation, fortifying critical infrastructure, and rehabilitating ecosystems.

Barbados has additionally set a standard in committing to upfront investments through the Blue Green Bank (BGB). The BGB establishes innovative financial solutions to allocate funding to scalable projects that seek to adapt to climate change. The inaugural project under the BGB, the Home Ownership Providing Energy (HOPE) Program, prioritizes long-term sustainability through the provision of affordable hurricane-resilient housing customized to lower-income buyers.

DISASTER MANAGEMENT ANALYSIS RESULTS

The Bridgetown Initiative (BI) focuses on economic stability and financial adjustments in response to climate change. It prioritizes the allocation of financial resource investments in disaster-resilient infrastructure, establishes financial frameworks that incorporate debt clauses to withstand the impacts of disasters within a community, and ensures the continuity of essential public services, such as health and education.

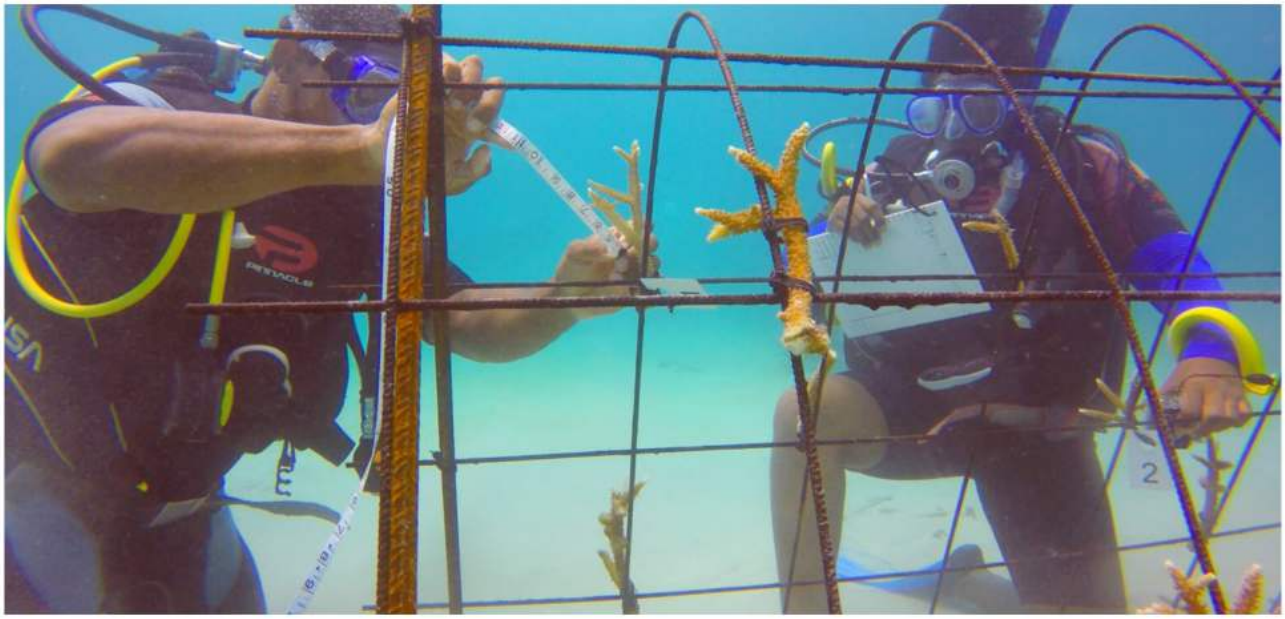
By implementing these initiatives, Barbados is at the forefront of innovative green energy and infrastructure models that trend away from the exploitation of fragile ecosystems and economies, towards a dependable shift in renewable energy and infrastructure development, ensuring fiscal security.

Areas where strengthened DM capacities are most needed in Barbados, include financial support, information management and sharing, human resources, and stronger training and education programs.

This study is designed to establish Barbados' baseline disaster management preparedness levels presented in six interconnected themes. It is a step towards meaningfully tracking progress while setting clear and coherent objectives aligned with Barbados' commitment to the Sendai Framework for Disaster Risk Reduction, the United Nations Sustainable Development Goals, CDEMA's CDM Priority Areas, and the Paris Agreement for Climate Change.

DISASTER MANAGEMENT ANALYSIS RESULTS

The Roofs to Reefs Programme (R2RP)

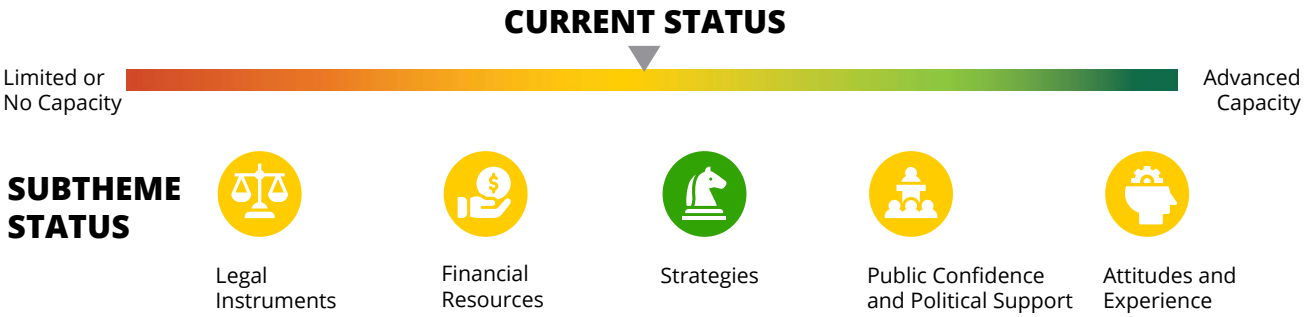


THE DMA

ENABLING ENVIRONMENT

ENABLING ENVIRONMENT

Findings indicate the Barbados' current Enabling Environment shows achievement with significant limitations.



Barbados has achieved progress to support increasing the capacity of the disaster management structures, authorities, processes, and capabilities enabled by their legal, institutional, financial, and social instruments. These rules, laws, policies, and other instruments allow capacity to develop and to achieve an effective risk reduction vision. Characterization of an enabling environment covers a range of issues from the existence and applicability of legislation to disaster management stakeholders' attitudes and experience.

ENABLING ENVIRONMENT

LEGAL INSTRUMENTS

FINDINGS

While the Emergency Management Act, 2007, serves as a comprehensive instrument for disaster management, it lacks provisions for building codes. The minimum standards set within the built environment, particularly for critical facilities such as schools, hospitals, and emergency shelters, do not adequately safeguard infrastructure and saving of lives during significant disasters.

However, recently Barbados introduced a funding collaboration involving the Resilience and Sustainability Facility (RSF) and international financial partners to bolster existing climate policies, adopt sustainable debt management practices, and mobilize both the private and public sector funds for climate-focused initiatives. This system will support investments in infrastructure and promote inventive investments in the nature and social capital of Barbados.

In addition, Barbados would gain from financing and establishing a regulatory framework for infrastructure that would integrate building codes into legislation, supervise land use and development plans, and enforce formal inspection mechanisms tailored to the nation's specific codes.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support Barbados in meeting its mission requirements:

- Conduct a formal review of building codes and propose additional codes if needed, led by the Department of Emergency Management (DEM).
- Establish a formal legal instrument to incentivize compliance and to support enforcement of building codes.
- Establish a multi-stakeholder framework to:
  - systematically inspect existing infrastructures, starting with the most critical, to make commendations for retrofitting opportunities.
  - oversee land use and development plans to ensure compliance prior to construction.
  - conduct building inspections and enforce codes.
- Align to similar initiatives currently underway within Barbados to ensure shared priorities and optimize resources.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
9, 11, 13

PARIS AGREEMENT ARTICLES
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.3, 2.4), 3, 4 (4.1, 4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

ENABLING ENVIRONMENT

FINANCIAL RESOURCES

FINDINGS

It is important that investments are prioritized and allocated to the financial needs of the Department of Emergency Management (DEM).

In directing adequate funding to support DEM, the country is simultaneously investing in overall enhanced capacity building to ensure timely communication and coordination mechanisms, improving cross-collaboration among national and international partners, and promoting community resilience-building activities.

These committed investments and allocated funding will strengthen the nation's readiness to anticipate, respond to, and recuperate from disasters. This financial commitment is of paramount importance, as it serves as a pivotal factor in safeguarding lives and vital assets throughout the country. Emphasizing the link between financial commitment to DRR,SDGs, and CCA and provision of funding to the DEM, will contribute to the overarching national goals of sustainable development, reduction of poverty, and economic expansion while enhancing the well-being of Barbadians.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM in meeting its mission requirements:

- Develop clear project proposals to demonstrate the impact and alignment of funding relating to the DRR, SDGs, and CCA. Collaborate with the Ministry of Finance, in resource allocation pertaining to governance budgets.
  - Incorporate data from needs assessments to provide evidence-based gaps and vulnerabilities for strategic allocation and priority of funding sources.
- Advocate for a predictable and dedicated national budget funding to meet the needs of DEM. Include avenues for equipment, infrastructure, training, and capacity building.
- Diversify funding sources to reduce dependency on a single donor and explore long-term funding opportunities such as grants, NGO and private sector partnerships, and accessing climate finance mechanisms.
- Invest in capacity building to enhance the skills and knowledge of DEM staff to include disaster management training, risk assessment, and response strategies.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, F, G

Guiding Principles
(a), (b), (c), (d), (e), (g), (h), (i), (j), (k), (m)

SDGs
9, 10, 11, 13, 14, 15, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1, 2 (2.2, 2.3, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

THE DMA

INSTITUTIONAL ARRANGEMENTS

INSTITUTIONAL ARRANGEMENTS

Findings indicate Barbados' current Institutional Arrangements show substantial progress with some limitations.

SUBTHEME STATUS

Organizational Structures

Leadership Arrangements

Mechanisms for Stakeholder Engagement

The organizational and institutional structures through which disaster management capacity forms are indicators of Barbados' Institutional Arrangements. By examining the organization and composition of diverse agencies and individuals that constitute a nation's disaster management capacity—detailing the relationships and collaboration between them — tangible opportunities for increased effectiveness are often revealed. Barbados has shown substantial progress within the organizational and institutional structures, their leadership, and their engagement with disaster management stakeholders.

INSTITUTIONAL ARRANGEMENTS

ORGANIZATIONAL STRUCTURES

FINDINGS

The Barbados National Emergency Management System (NEMS) would benefit by prioritizing cross-sector ministerial planning efforts. This ensures alignment with national resources and objectives. Additionally, inclusion of the Prime Minister's Office is essential for the provision of high-level support.

Effective harmonization of DRR, SDG, and CCA initiatives would prevent duplication of efforts and foster interministerial coordination and collaboration. Focus efforts on capacity building, policy development, advocacy, and initiatives crucial for providing leadership, guidance, and direction in guiding the ministries towards improved preparedness. This will, in turn, lead to efficient use of limited resources and strengthen planning endeavors across ministries cultivating a more unified and synergistic approach to disaster management.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support Barbados in meeting its mission requirements:

- Harmonize DRR, SDGs, and CCA initiatives to prevent duplication of efforts and align inter-ministerial coordination and collaboration.
- Ensure well-established lines of communication with the Prime Minister's Office, Ministry of Finance, and other high-level decision-making bodies for swift coordination, resource allocation, and synergistic planning.
- Ensure regular avenues for information-sharing are established to provide a more harmonious ministerial approach to planning.
- Promote the facilitation and exchange of best practices, resources, and information sharing among ministries.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

Global Targets
A, B, C, D, E

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
3, 6, 7, 9, 10, 11, 13, 14, 15, 16

PARIS AGREEMENT ARTICLES
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

INSTITUTIONAL ARRANGEMENTS

THE DMA

DISASTER GOVERNANCE MECHANISMS

DISASTER GOVERNANCE MECHANISMS

Findings indicate the Barbados' Disaster Governance Mechanisms show substantial progress with some limitations.

SUBTHEME STATUS

Plans and processes

Command, Control, and Coordination Systems

Emergency Operations Centers

Disaster management efforts are most effective when guided by standardized, formalized systems and procedures that dictate how and by whom activities are conducted. The effectiveness of all disaster management phases, including disaster preparedness, hazard mitigation, response, and recovery, is dependent on the establishment and documentation of such mechanisms. The DMA analyzed the following sub-themes that characterize the Disaster Governance Mechanisms of Barbados: Plans and Standard Operating Procedures (SOPs); Command, Control, and Coordination Systems, and Emergency Operations Centers.

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

Under the Barbados National Energy Policy (2019-2030) the government strides to deliver innovative strategies for maintaining energy supply and consumption across various sectors within the country. The overarching goal is to transition the nation towards an economy focused on sustainable energy and renewable resources and limit future dependence on petroleum-based industries and impacts of global economic turmoil.

Along with this transformation, Barbados has established industrial storage facilities throughout the country that contribute to the generation, storage, and dissemination of local energy and resources. It would be advantageous to ensure the safeguarding of these resources and the mitigation of potential hazards that might pose a threat to these facilities. Often in the wake of a natural disaster such as an earthquake, tsunami, or hurricane, cascading repercussions lead to industrial accidents or chemical spills. Consequently, the nation would derive substantial benefits from the establishment of a comprehensive Hazardous Materials (HAZMAT) Compound Disaster Plan.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support Barbados in meeting its mission requirements:

- Develop a comprehensive HAZMAT Plan for compounding disaster events that outlines procedures, responsibilities, and resources required to mitigate and respond to industrial accidents and/or chemical spills from disasters.
- Conduct regular risk assessments associated with industrial storage sites and identify potential hazards. Identify sites that could be more vulnerable to natural disaster impacts and their cascading impacts. Update the HAZMAT Plan annually to incorporate findings from the assessments.
- Train/cross-train personnel responsible for handling hazardous materials and ensure an adequate workforce that is well-prepared to respond effectively in the event of a HAZMAT incident.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
6, 7, 9, 11, 13

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.3, 2.4), 3 (3.1, 3.2), 4 (4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

In 2019, the Department of Emergency Management (DEM) introduced the "Policy Framework and Standard Operating Procedures for Systematic Shutdown and Reactivation of Barbados". This framework outlines that both the private sector and government entities collaborate to enhance Continuity of Government (COG) and Business Continuity Planning (BCP) plans and protocols. The 2023 Disaster Comprehensive Management Strategy calls for the incorporation of BCP as a requisite within the private sector.

It would benefit all stakeholders in Barbados for the DEM to continue to provide leadership, planning templates, and training resources to promote COG and BCP planning among government and the private sector enterprises.

Additionally, harmonizing COG and BCP efforts is essential to ensure the provision of critical services, while upholding the objectives of disaster management. This focus on promoting sustainable governance principles ultimately results in enhanced standards and systematic oversight of vital personnel and infrastructure.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM in meeting its mission requirements:

- Develop and disseminate a standardized template for BCP tailored to the private sector.
- Build upon established relationships within EMAC and Standing Committees, local volunteers, NGOs, CBOs, and private sector through joint working groups, and dedicated points of contact to facilitate discussions and information sharing.
- Create mechanisms for sharing critical information, data, and resources to include access to real-time data, such as weather forecasts and disaster impact assessments, which can be crucial for decision-making during a crisis.
- Establish and integrate into plans and protocols MOUs that outline roles, responsibilities, and expectations of both government and private sector entities, ensure inclusion of liabilities and resource allocation.
- Develop joint COG/BCP training and exercises to ensure alignment in response and recovery procedures.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 4

Global Targets
A, B, D

Guiding Principles
(a), (b), (e), (h)

SDGs
11, 16

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4),
3 (3.1, 3.2), 4 (4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

THE DMA

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

Findings indicate Barbados' current Capabilities and Resources show achievement with significant limitations.

SUBTHEME STATUS

The nature and extent of skills, knowledge, supplies, resources, equipment, facilities, and other capacity components dedicated to meeting disaster management needs is an indication of Barbados' overall capabilities and resources. The DMA examines these components, the source and size of surge capacities available in times of disaster, and a broad array of disaster-focused functional capabilities like search and rescue, sanitation, and security. For this analysis, the following core thematic areas were reviewed: Dedicated Facilities and Equipment; Human Resources; Inventory of Commodities and Supplies; Targeted Functional Capabilities.

CAPABILITIES AND RESOURCES

HUMAN RESOURCES

FINDINGS

The Department of Emergency Management (DEM) requires additional staffing, particularly in technical capacities. A properly staffed DEM is pivotal for optimizing evidence-based decision-making, enabling robust evaluation of data analytics, and enhancing research opportunities crucial to DRR, SDGs, and CCA efforts.

Securing additional resources to support the recruitment of technical personnel within the DEM is also essential.

Staffing shortages present significant challenges to effectively fulfill crucial disaster management roles. Additional technical staffing would augment existing capacities empowering the DEM to continue leveraging effective policies, strategies, and planning efforts. Ultimately, contributing to the country's overarching global commitment to advance Barbados towards sustainable energy and renewable resource initiatives by 2030.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM in meeting its mission requirements:

- Acquire additional technical staffing within the DEM to augment the department's existing capacity, enabling proficient execution of mandated requirements.
- Identify and allocate funding and resources dedicated to facilitating the recruitment and hiring of additional DEM personnel.
- Ensure DEM capabilities include specialized expertise crucial for contributing to evidence-based decision-making processes that involve:
  - Effectively analyzing data and conducting research related to the alignment of DRR, SDGs, and CCA efforts.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
11, 13, 16

PARIS AGREEMENT ARTICLES
7.1, 8.1

CDEMA CDM Priority Areas
1, 2 (2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

CAPABILITIES AND RESOURCES

THE DMA

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT

Findings indicate Barbados' current Capacity Development efforts are at achievement with significant limitations.

SUBTHEME STATUS

- Plans and Strategies
- Training and Education Programs and Facilities
- Monitoring and Evaluation

Barbados' ability to advance disaster management strategies that achieve risk reduction and resilience goals is ultimately dependent on its ability to support capacity development. From training and education that supports the advancement of knowledge and skills to the institutionalization of appropriate attitudes and cultures, capacity development requires the continuous advancement of assessments, strategic plans, programs, facilities, and many other components of the sub-themes examined in this report. The DMA analyzes resources and opportunities for all stakeholders and all sectors, from individuals and vulnerable populations to government responders. This DMA's sub-themes include Capacity Development Plans and Strategies; Training and Education Programs and Facilities; and Monitoring and Evaluation Processes and Systems.

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT PLANS AND STRATEGIES

FINDINGS

Through direct initiatives and programs, Barbados Department of Emergency Management (DEM) has made good progress in strengthening their capacity to prepare for, respond to, and recover from disasters. To further advance these initiatives, Barbados would benefit from a methodical assessment particularly focusing on disaster management (DM) and disaster risk reduction (DRR) endeavors.

The DEM would benefit from having more resources directed to the oversight and promotion of DM and DRR capabilities to benefit the implementation of essential strategies and planning enhancement necessary to augment existing capacity.

This will lead to heightened coordination efficiency, more streamlined initiatives, and optimized asset allocation to address DM and DRR capacity and resource requisites.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM and NEMS in meeting mission requirements:

- Formulate and disseminate DM and DRR development plans and/or strategies to drive initiatives towards advanced capacity.
  - Ensure linkage to key stakeholders such as Red Cross, the Ministry of Community Development, and volunteers.
  - Incentivize volunteers to consistently engage and participate in community programs through provision of a voucher program or similar reward initiative.
- Promote enhanced oversight of coordination and support of capacity development efforts for DM and DRR.
  - Support key sectors and requirements on incorporation of DRR into plan development, implementation, and maintenance.
  - Include mechanisms for public engagement on national and local DRR strategies.
  - Strengthen engagement with the Emergency Management Advisory Council (EMAC) Standing Committee when appropriate.
  - Engage vulnerable groups and underserved populations in DM plans and strategies with focused efforts on response/recovery, evacuation, and shelter considerations.
- Conduct systematic evaluations to assess current capacity and improve resource requirements across sectors for DM and DRR on a predetermined basis.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 3, 4

Global Targets
A, B, C, D, E

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
6, 7, 11, 13, 14, 15, 16

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3, 4 (4.1, 4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

CAPACITY DEVELOPMENT

TRAINING AND EDUCATION PROGRAM AND FACILITIES

FINDINGS

The Government of Barbados and Department of Emergency Management (DEM) has developed a comprehensive National Emergency Management System (NEMS) that serves as a broad-based multi-sector stakeholder framework to secure a state of readiness and effectively mitigate disaster risks in Barbados.

The NEMS in Barbados would benefit from a formalization of their disaster training and exercise (T&E) initiatives into one centralized official program, led and coordinated by the DEM.

A centralized training and information initiative would further foster interagency collaboration and communication among the NEMS community leading to a more effective and coordinated response to disasters.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM and NEMS in meeting mission requirements:

- Identify dedicated staff within the DEM to support a formal T&E program with primary responsibilities of exercise logistics, coordination, and alignment with multi-agency calendars.
  - Increase annual simulation and scenario-based exercises, particularly among response agencies, to enhance collaboration and capacity building across communities.
  - Building on Tradewinds and other national-level exercises, plan a systematic national-level exercise.
- Create a master training schedule and oversee communication channels and social media platforms to augment visibility, facilitate information sharing, and optimize collaboration.
- Implement a digital record management system accessible to all participating agencies to formalize T&E schedules, participants, evaluations, and lessons learned for both review and real-time updates.
- Ensure a standardized T&E reporting framework for consistent data collection to encompass key metrics, observation, and feedback mechanisms for formal performance evaluations and after-action reporting.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action

1, 2, 3, 4

Global Targets

A, B, C, D, F

Guiding Principles

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs

4, 11, 16, 17

CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2), 3, 4 (4.1, 4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT PLANS AND STRATEGIES

FINDINGS

The Department of Emergency Management (DEM) has made significant strides in its preparedness, response, and recovery capabilities in the face of disasters through targeted initiatives and programs. To further these efforts, the implementation of a comprehensive national Statistical Plan, in coordination with the Barbados Statistical Service (BSS), to enhance mechanisms for coordinating and quantifying national data would be invaluable. Recognizing the pivotal role of data and statistical analysis in monitoring and assessing progress, Barbados is poised to derive substantial benefits from such measures in the pursuit of its Strategic National Goals (SDGs) and the ambitious initiatives outlined in its 2030 Agenda.

Continue to build upon the collaborative endeavors of the DEM, BSS, and the Statistics Standing Committee and synergize coordination of disaster risk reduction (DRR) initiatives. This concerted effort aims to systematically ensure the tracking and monitoring of the nation's statistical data, improve quality, enhance production, and ultimately accelerate the country's capabilities in reaching national DRR and disaster management (DM) goals.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM and NEMS in meeting mission requirements:

- Foster collaboration among the DEM, BSS, and Statistics Standing Committee through joint working groups to share platforms and facilitate sharing of information, expertise, and data resources.
  - Integrate disaster assessment statistics with census data to enhance DM strategies.
  - Incorporate SDG data collection for comprehensive tracking and progress reporting.
- Develop a robust and comprehensive National Statistical Plan that outlines clear objectives, methodologies, and timelines for tracking and monitoring the country's statistical data related to DM initiatives.
- Prioritize training programs and capacity-building for personnel involved in data collection, analysis, and reporting.
- Implement modern technology and data management tools to streamline the collection, analysis, and dissemination of statistical information.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

SDGs
1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

PARIS AGREEMENT ARTICLES
7.1, 8.1

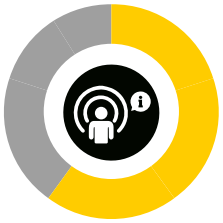
CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3), 2, 3 (3.1, 3.2), 4 (4.2, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

CAPACITY DEVELOPMENT

THE DMA

COMMUNICATION AND INFORMATION



COMMUNICATION AND INFORMATION MANAGEMENT

Findings indicate Barbados' Communication and Information Management capacity shows achievement with significant limitation.

CURRENT STATUS

Limited or No Capacity — Advanced Capacity

SUBTHEME STATUS

- Hazard and Risk Analysis Systems
- Monitoring and Notifications
- Disaster Assessment
- Information Collection, Management, and Distribution
- Media and Public Affairs

Disaster management is a risk-based endeavor, and as such the capacity of stakeholders to generate, manage, and share risk and incident related information is critical. This area of analysis looks at the systems, processes, and procedures that have been established in Barbados to inform pre-and post-disaster activities. From hazard mapping and event monitoring, to warning and notification, communication and information management sub-themes address a broad range of topics that highlight effective practices.

COMMUNICATION AND INFORMATION MANAGEMENT

INFORMATION COLLECTION, MANAGEMENT, AND DISTRIBUTION

FINDINGS

Barbados has made significant progress in communication infrastructure investment, prioritizing this initiative to stay ahead in the digital arena. To further fortify this leading position and address any lingering digital infrastructure gaps, Barbados would benefit from establishing a robust and collaborative data management framework and added integration of existing GIS capabilities, as evidenced by the Updated Physical Development Plan (PDP) for Barbados.

The PDP adeptly integrated GIS data and mapping strategies to showcase overarching urban design principles and leverage vital community visualizations. The Department of Emergency Management (DEM) could derive advantages from collaborating with agencies that proficiently utilize GIS data and mapping capabilities, thereby applying them across sectors and supporting the DEM in its disaster risk reduction endeavors.

With the addition of GIS, a data framework would ensure a digital platform for collectively addressing the critical aspects of data collection, sharing, integration, and accessibility, fundamental for informed decision-making. Thus, strengthening an already robust capacity for improved coordination and enhanced disaster response and recovery.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM in meeting its mission requirements:

- Harmonize the national data collection and storage standards with Barbados' overarching digital agenda.
- Facilitate the sharing of data among governmental entities, non-governmental disaster management stakeholders, and with the general public.
- Implement a centralized, GIS-based data management system and utilize to leverage a common operating picture.
  - Identify priority needs, conduct risk assessments/losses, and disaster data for capacity development.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, F, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs
1, 2, 3, 4, 6, 7, 9, 11, 13, 14, 15,16, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

COMMUNICATION AND INFORMATION MANAGEMENT

HAZARD AND RISK ANALYSIS

FINDINGS

Barbados data holdings are not easily accessible to support the Disaster Management (DM) Mission of DEM. The data in current form are not uniform, centralized, or easily applied without extensive statistical or GIS knowledge and skills.

The completed NDPBA provides Barbados with a Risk and Vulnerability Assessment (RVA) that provides comprehensive hazard mapping, exposure assessments, and characterizations of vulnerability and coping capacity to support DM. Stakeholder access to DisasterAWARE offers situational awareness, early warning capability, and decision-making support during response operations. In addition to tracking capital stock and critical infrastructure, the RVA provides a snapshot of socioeconomic vulnerability, coping capacity, and exposure of populations. This data can be leveraged to directly support the strengthening of community resilience via pre-disaster planning for post-disaster recovery.

RECOMMENDATIONS

It is recommended that the following activities be implemented to support DEM in meeting its mission requirements:

- Consider utilizing the NDPBA data alongside GIS-mapping capabilities and systems to address geospatial data and logistics to inform community-based DM and planning efforts.
- Leverage resources within the RVA, including hazard mapping for population exposures, critical infrastructure locations, and evacuation/shelter identification to drive sector-based community planning, improved infrastructure for facilities, and profiling of vulnerable groups.
- Generate local hazard and risk maps to facilitate and advance data-driven and scenario-based training, exercise planning, and preparedness activities.
- Utilize GIS-based mapping systems to assist in risk assessments, management, and decision-making processes, determining necessary requirements for risk and vulnerability assessments in DM and DRR planning.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, F, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs
1, 2, 3, 6, 7, 9, 11, 13, 14, 15, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

THE NDPBA

COMMENDATIONS FOR BEST PRACTICES

COMMENDATIONS FOR BEST PRACTICES

LEGAL INSTRUMENTS

Recognizing a Standard of Practice for Policy Cohesion Across Sectors

Policies, such as the 2023 Comprehensive Disaster Management Policy, strategically aligns directions for disaster risk reduction (DRR) with international and regional reforms, reflecting a vision for safer communities, resilient individuals, a protected environment, a stable society, and a sustainable economy.

Additionally, continued alignment with the 2030 Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, and the Paris Agreement ensures Barbados is positioned to enhance collaboration and synchronization with the global initiatives addressing climate change, both within country and internationally. The strategic alignment of priority areas, plans, and protocols bolster the establishment of a robust governance system, disaster mitigation based on data and analysis, operational readiness at all societal levels, integration into key sectors, community resilience building, research initiatives, and organized national and community recovery involving all stakeholders.

The DEM's emphasis on the importance of ownership and active involvement of all sectors, highlighted the need for an articulated plan of action developed and owned by each sector itself. While the government is committed to providing expertise and support, the collaborative nature of disaster risk management involves a shared commitment and a sense of ownership from all stakeholders.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, F, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs
1, 2, 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4

COMMENDATIONS FOR BEST PRACTICES

FINANCIAL RESOURCES

Recognizing a Standard of Practice for Disaster-Resilient Nations: Barbados' Strategies and Initiatives in Climate Adaptation

The Roofs to Reef Programme (R2RP) is a national initiative that incorporates mitigation measures to reduce the impacts of climate change. The R2RP highlights the interconnectivity of ecosystems and aims to implement infrastructure that fosters sustainable development and climate change resilience. This initiative has been hailed as a model for other nations and establishes guidelines for building disaster-resilient homes, decreasing land-based pollution, enhancing renewable energy generation, fortifying critical infrastructure, and rehabilitating ecosystems.

Barbados has set the gold standard in committing to upfront investments through the Blue Green Bank (BGB). The BGB establishes innovative financial solutions to allocate funding to scalable projects that seek to adapt to climate change. The inaugural project under the BGB, the Home Ownership Providing Energy (HOPE) Programme, prioritizes long-term sustainability through the provision of affordable hurricane-resilient housing customized to lower-income buyers.

The Bridgetown Initiative (BI) focuses on economic stability and financial adjustments in response to climate change. It prioritizes the allocation of financial resource investments in disaster-resilient infrastructure, establishes financial frameworks that incorporate debt clauses to withstand the impacts of disasters within a community, and ensures the continuity of essential public services, such as health and education.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, E, G

Guiding Principles
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k),

SDGs
1, 2, 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.2, 2.3) 3, 4 (4.2, 4.3, 4.4)

COMMENDATIONS FOR BEST PRACTICES

IMPLEMENTATION OF SDG/2030 AGENDA

Recognizing a Commitment to a National Platform for Advancing the 2030 Agenda and Implementation of the Sustainable Development Goals (SDGs)

Guided by the leadership of Prime Minister, Mia Mottley, Barbados has made a substantial commitment to the 2030 Agenda and the SDGs through the "Declaration of Mission Barbados May 2023". This initiative highlights a steadfast, long-term dedication, and encapsulates a comprehensive framework consisting of six core missions. The overarching objective sets to position Barbados on a trajectory that enables the attainment of substantial health, social, and cultural goals, amid formidable challenges the country faces with climate change, pandemics, and ongoing conflicts. This declaration, along with unique programs such as the Roof to Reefs Programme (R2RP), serve as testaments to Barbados' unwavering dedication to fortifying the nation's resilience through implementation of project models that align with the SDGs and the 2030 Agenda.

The elevated standards set by Barbados have positioned them to be at the forefront of crafting and implementing comprehensive national policies aimed at nurturing a culture of resilience. In addition, Barbados' leadership in establishing these high-level standards has had a ripple effect throughout the region, inspiring other island states to elevate their own disaster preparedness and resilience efforts. This culture of broader thinking across the Caribbean continues to be an innovative approach to confronting the unique challenges faced by small island states in today's global landscape.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 4

Global Targets
F

Guiding Principles
(a), (b), (d), (e), (h), (k), (l)

SDGs
1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.3, 2.4), 3, 4 (4.2)

COMMENDATIONS FOR BEST PRACTICES

COMMUNICATION AND INFORMATION MANAGEMENT

Enhanced Tsunami Preparedness and Community Resilience in Barbados: Tsunami Ready Programme

In 2020 (Shermans, St. Lucy to Mullins, St. Peter) and 2023 (Christ Church West), Barbados, received recognition for completing and adhering to the Tsunami Ready Programme. This compliance has empowered vulnerable coastal communities within the nation to take effective measures in the face of potential tsunami threats. This initiative involved tailoring inundation and evacuation maps to every community, installing evacuation route signage and assembly points, as well as clear demarcation of tsunami hazard zones. Additionally, extensive public outreach and communication awareness campaigns were conducted to disseminate critical information.

The successful recognition and renewal of Barbados' Tsunami Ready achievement was acknowledged by international partners who validated and encouraged their ongoing commitment to preparedness. These efforts not only strengthened the country's ability to respond to tsunamis effectively but also contributed to the overall resilience of the coastal communities.

By improving awareness, knowledge, and response capabilities, these initiatives empower residents to take decisive action during tsunami events, ultimately saving lives and minimizing the impact of disasters on the community.

SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, D, E

Guiding Principles
(a), (b), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs
3, 4, 7, 9, 10, 11, 12, 13, 15,16, 17

Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3, 4 (4.2, 4.3, 4.4)

COMMENDATIONS FOR BEST PRACTICES

THE NDPBA

NATIONAL RECOMMENDATIONS

THE NDPBA
NATIONAL RECOMMENDATIONS

1 ENSURE THAT A PORTION OF THE INTERNATIONAL CLIMATE FUNDING RECEIVED AT THE NATIONAL LEVEL IS AVAILABLE TO THE DEM TO SUPPORT NECESSARY MITIGATION AND ADAPTATION MEASURES, ESPECIALLY WHERE DISASTER RISK REDUCTION INITIATIVES DIRECTLY SUPPORT CLIMATE CHANGE ADAPTATION.

- Establish mechanism to ensure that climate adaptation is seen as an extension of DEM's resilience-building mandate.
- Secure funding for the implementation of mitigation measures to reduce current and future impacts of coastal hazards due to climate change.
- Develop clear project proposals where the DEM can demonstrate the impact and alignment of projects with climate change adaptation.
    - Focus on future climate impacts of coastal hazards and maritime infrastructure.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action 1, 2, 3, 4	**SDGs** 9, 11, 13, 14, 15, 17
Global Target (s) A, B, C, D, E, F, G	**Paris Agreement Articles** 7.1, 8.1
Guiding Principle(s) (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)	**CDEMA CDM Priority Areas** 1, 2 (2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)

2 INCREASE COMMUNICATION AND COLLABORATION OF ALL GOVERNMENT MINISTRIES AND DEPARTMENTS ENGAGED IN THE EMERGENCY MANAGEMENT ADVISORY COUNCIL (EMAC) AND NATIONAL EMERGENCY MANAGEMENT SYSTEM (NEMS).

- Hold regular policy coordination and planning meetings of principal Advisory Council leadership.
- Offer training and exercise opportunities to EMAC members.
- Ensure strong lines of communication with the Prime Minister's Office and other high-level decision-making bodies for swift coordination, resource allocation, and synergistic planning.
- Ensure information-sharing mechanisms are established to provide a more harmonious approach to planning, to ensure efficiency of resources and prevent duplication of effort.
- Prioritize the alignment of government efforts and improve inter-agency coordination.
- Track all DRR, SDGs, and CCA initiatives to ensure that efforts are streamlined, and duplication is avoided.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

SDGs
8, 9, 11, 13, 14, 15, 16, 17

Global Target (s)
A, B, C, D

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (e), (f), (g), (h)

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3 (3.2), 4 (4.2)

3

PROMOTE EVIDENCE-BASED DECISION-MAKING BY SUPPORTING A CENTRALIZED MULTI-AGENCY DATA REPOSITORY FOR DISASTER MANAGEMENT, RISK REDUCTION, AND RESILIENCE.

- Promote data sharing among governmental entities, non-governmental disaster management stakeholders, academia, and with the public to ensure that the best and latest information is available to all stakeholders.
- Continue to build upon the collaborative endeavors of the DEM, BSS, and the Statistics Standing Committee to establish a synergistic national strategy to monitor the nation's statistical data, improve quality, and enhance production to accelerate the country's statistical capacity.
- Implement a centralized, GIS-based data management system and utilize to leverage a common operating picture that supports identification of high-risk areas, priority needs, resource tracking, and damage/loss data to promote response and recovery capacity development.
- Harmonize the national data collection and storage standards with Barbados' overarching digital agenda.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
1, 2, 3, 4, 6, 7, 9, 11, 13, 14, 15, 16, 17

Global Target (s)
A, B, C, D, E, F, G

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

4 ESTABLISH WITHIN THE DEM A DISASTER LOGISTICS COORDINATION CAPACITY AND CATALOG OF DISASTER MANAGEMENT STOCKPILES AND RESOURCES TO SUPPORT STRATEGIC DESIGNATION AND MAINTENANCE OF STORAGE FACILITIES.

- Leverage the Barbados National Emergency Management System (NEMS) to support comprehensive standardized reporting of DM supply inventories, encompassing all facilities and administrative levels.
- Utilize scenario-based modeling to project post-disaster commodity needs (e.g., food, water, pharmaceuticals) and establish secure, strategically designed storage facilities to fulfill distribution criteria.
- Maintain commodity stockpiles at levels that meet estimated requirements, particularly in underserved, and densely populated areas.
- Implement the organization and administration within DEM necessary to manage DM resources and supply inventories via a digital centralized information system.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

SDGs
3, 11, 16

Global Target (s)
A, C, D

CDEMA CDM Priority Areas
1, 3 (3.1, 3.2), 4 (4.1, 4.2)

Guiding Principle(s)
(a), (b), (e), (f), (g), (h), (i)

5 CONDUCT A COMPREHENSIVE PLANNING AUDIT TO IDENTIFY NECESSARY PLANS THAT DO NOT EXIST AND UPDATE EXISTING PLANS THAT HAVE BECOME OUTDATED.

- Develop a comprehensive HAZMAT Plan for cascading disaster events.
  - Identify sites that could be more vulnerable to natural disaster impacts and their cascading impacts.
  - Conduct regular risk assessments associated with industrial storage sites and identify potential hazards.
- Develop and disseminate a standardized template for Business Continuity Planning (BCP) tailored to the private sector, facilitating consistency and effective planning across businesses in Barbados.
  - Harmonize Continuity of Government (COG) and BCP efforts to ensure the provision of critical services, while upholding the objectives of disaster management and sustainable governance to enhance the nation's resilience.
  - Create mechanisms for sharing critical information, data, and resources to include access to real-time data, such as weather forecasts and disaster impact assessments, which can be crucial for decision-making during a crisis.
  - Develop joint COG/BCP training and exercises to ensure alignment in response and recovery procedures.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

SDGs
11, 16

Global Target (s)
A, C, D

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.2, 4.4)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

6 ENSURE THAT DISASTER MANAGEMENT PLANS CONSIDER THE COMPLEXITIES AND POTENTIAL CASCADING IMPACTS ASSOCIATED WITH RESPONSE TO EMERGENCIES IN DENSELY POPULATED COMMUNITIES AND URBAN AREAS.

- Utilize up-to-date hazard maps to identify locations where hazard impacts may interfere with ingress and egress routes.
- Identify locations of vulnerable populations that may require more time or assistance with evacuation.
- Engage communities in planning efforts to identify challenges and proactive solutions in advance of a disaster situation.
- Engage public transportation companies in disaster management planning processes. Establish formal arrangements to assist disaster-affected populations with transportation needs related to evacuation and sheltering.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

SDGs
9, 10, 11, 16

Global Target (s)
A, B, C, D

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.2, 2.3), 3 (3.1), 4 (4.2, 4.3, 4.4)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

7

UTILIZE GIS-MAPPING CAPABILITIES AND SYSTEMS TO ADDRESS GEOSPATIAL DATA AND LOGISTICS TO INFORM COMMUNITY-BASED DISASTER MANAGEMENT AND PLANNING EFFORTS.

- Leverage resources, including hazard mapping for population exposures, critical infrastructure locations, and evacuation/shelter identification to drive sector-based community planning, improved infrastructure for facilities, and provide for vulnerable groups.
- Generate local hazard and risk maps to facilitate and advance data-driven and scenario-based training, exercise planning, and preparedness activities.
- Utilize GIS-based mapping systems to assist in risk assessments, management, and decision-making processes, determining necessary requirements for risk and vulnerability assessments in DM and DRR planning.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action

1, 2, 3, 4

Global Target (s)

A, B, C, D, E, F, G

Guiding Principle(s)

(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

SDGs

1, 2, 3, 6, 7, 9, 11, 13, 14, 15, 17

CDEMA CDM Priority Areas

1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

8 FORMULATE AND DISSEMINATE DISASTER MANAGEMENT AND DISASTER RISK REDUCTION DEVELOPMENT PLANS AND STRATEGIES TO DRIVE INITIATIVES TOWARDS ADVANCED CAPACITY.

- Ensure linkage to key stakeholders such as Red Cross, Ministry of Community Development, and volunteers.
- Promote enhanced oversight of coordination and support of capacity development efforts for DM and DRR.
  - Support key sectors and requirements on incorporation of DRR into plan development, implementation, and maintenance.
  - Engage vulnerable groups and underserved populations in DM plans and strategies with focused efforts on response/recovery, evacuation, and shelter considerations.
- Conduct systematic evaluations to assess current capacity and improve resource requirements across sectors for DM and DRR on a predetermined basis.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
6, 7, 9, 11, 13, 14, 15

Global Target (s)
A, B, C, D, E

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)

9

FORMALIZE DISASTER TRAINING AND EXERCISE INITIATIVES INTO A CENTRALIZED OFFICIAL PROGRAM, LED AND COORDINATED BY THE DEM.

- Identify dedicated staff within the DEM to support a formal T&E program with primary responsibilities of exercise logistics, coordination, and alignment with multi-agency calendars.
- Create a master training schedule and oversee communication channels and social media platforms to augment visibility, facilitate information sharing, and optimize collaboration.
- Implement a digital record management system accessible to all participating agencies to formalize T&E schedules, participants, evaluations, and lessons-learned for both review and real-time updates.
- Ensure a standardized T&E reporting framework for consistent data collection to encompass key metrics, observation, and feedback mechanisms for formal performance evaluations and after-action reporting.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
4, 11, 16

Global Target (s)
A, B, C, D, F

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2), 3, 4 (4.2, 4.4)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m)

10 INCREASE THE ANNUAL BUDGET TO DIRECTLY SUPPORT THE DEPARTMENT OF EMERGENCY MANAGEMENT'S (DEM) GROWING NEED FOR TECHNICAL STAFF AND EXPANDED PROGRAMS REQUIRED TO MEET THE PREDICTED ESCALATION IN CLIMATE-RELATED HAZARDS AFFECTING BARBADOS.

- Include annual operating costs and necessary funds to fully implement the 2023 Comprehensive Disaster Management Policy and the forthcoming 2024 Country Work Programme
- Ensure comprehensive and adequate funding resources to allow for necessary human resources, implement necessary programs, purchase equipment, sustain infrastructure, build capacity, and support response operations.
  - Focus on future climate impacts of coastal hazards and maritime infrastructure.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
9, 11, 13, 14, 15, 17

Global Target (s)
A, B, C, D, E, G

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

CDEMA CDM Priority Areas
1, 2 (2.2, 2.3), 3 (3.1, 3.2) 4 (4.2, 4.4)

11

CONDUCT A FORMAL REVIEW OF CURRENT BUILDING CODES AND PROPOSE ADDITIONAL CODES IF NEEDED IN COLLABORATION WITH THE DEPARTMENT OF EMERGENCY MANAGEMENT (DEM), MINISTRY OF PUBLIC WORKS - BARBADOS BUILDING AUTHORITY, AND PRIME MINISTER'S OFFICE - TOWN PLANNING DEPARTMENT.

- Determine if current codes meet the needs of today's Barbados and can support the nation into the future given the increase in the number and intensity of hazards expected to impact the country as a result of climate change.
- Institutionalize the recognition of the changing risk profile due to climate change; building codes should be treated as living documents to ensure they can meet changing demands.
- Establish a multi-stakeholder pathway a systematic inspection of existing infrastructures, starting with the most critical, to make recommendations for retrofitting opportunities.
- Oversee land use and development plans to ensure compliance prior to construction.
- Provide incentives to homeowners and businesses to retrofit poorly built or aging structures, install safety measures and equipment, and increase overall resilience of existing buildings.
- Align to similar initiatives currently underway within Barbados, such as the Roofs to Reefs National Resilience Plan and the Blue Green Bank, to ensure shared priorities and optimize resources.
- Consideration to be given to historic buildings and existing infrastructure and whether they are grandfathered in.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Target (s)
A, B, C, D, E

Guiding Principle(s)
(a), (b), (c), (e), (f), (g), (h), (i), (j), (k)

SDGs
6, 7, 9, 11, 13, 15, 16

Paris Agreement Articles
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3, 4 (4.1, 4.2, 4.4)

12

EXPAND AWARENESS AND PREPAREDNESS CAMPAIGNS AMONG RESIDENTS, VISITORS, AND BUSINESSES FOR NATURAL AND MANMADE HAZARDS AFFECTING BARBADOS.

- Increase public understanding of hazards and their potential impacts, alert and warning messages, and the safety and preparedness measures that can be taken to protect lives and livelihoods through a multi-faceted, multi-stakeholder engagement strategy involving disaster managers, schools, media, non-governmental organizations, and other supporting agencies.
- Institute evacuation plans and exercises for high density housing developments and communities adjacent to industrial and or hazardous material sites to protect against unmitigated exposure to harmful substances.
- Conduct outreach campaigns promoting knowledge and use of alert and warning system tools through a multi-faceted, multi-stakeholder engagement strategy.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
4, 11, 13

Global Target (s)
A, B, C, D, E

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (h), (i), (j), (k)

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.3, 2.4), 3 (3.2, 3.3), 4 (4.2, 4.4)

13

EXPAND THE TSUNAMI READY PROGRAMME TO ALL SUSCEPTIBLE PARISHES LOCATED WITHIN THE TSUNAMI HAZARD ZONES.

- Ensure future planning and preparedness efforts are incorporating climate change adaptation and forecasting sea level rise.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

SDGs
3, 11, 13

Global Target (s)
A, B, G

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.3, 2.4), 4

Guiding Principle(s)
(a), (b), (d), (e), (f), (h), (i), (k)

14

STRENGTHEN ALL-HAZARDS MONITORING AND COMMUNICATIONS SYSTEMS AND DATA TRANSLATION INTO COMPREHENSIVE EARLY WARNING SYSTEMS (EWS) CAPABILITIES.

- Invest in advanced communication technologies to address challenges within “dead zones”.
- Customize EWS to meet specific demographic needs of communities and ensure EWS efficacy in reaching exposed and vulnerable communities promptly.
- Conduct regular system evaluations of the notification and EWS to identify areas for improvement and ongoing effectiveness.

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

SDGs
9, 10, 11

Global Target (s)
A, B, C, D, G

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.1, 2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.3, 4.4)

Guiding Principle(s)
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k)

15

EXPORT SUCCESSES AND LESSONS LEARNED THROUGH BARBADOS' CAPACITY-BUILDING EFFORTS, INCLUDING THE ROOFS TO REEFS PROGRAM, TO SUPPORT CLIMATE RESILIENCE AND RISK REDUCTION ACTIONS NATIONALLY AND INTERNATIONALLY.

- Promote Barbados' gold-standard strategies and initiatives regionally and globally, including the Blue Green Bank (BGB), the Home Ownership Providing Energy (HOPE) Programme, and the Bridgetown Initiative (BI), including the Roofs to Reef Programme (R2RP).

ALIGNMENTS: SENDAI FRAMEWORK, SDGS, PARIS AGREEMENT, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 4

SDGs
4, 6, 7, 8, 9, 10, 11, 13, 17

Global Target (s)
E, F

Paris Agreement Articles
7.1, 8.1

Guiding Principle(s)
(a), (b), (c), (e), (f), (g), (h), (j), (k), (l), (m)

CDEMA CDM Priority Areas
1 (1.3, 1.4), 2, 3 (3.1, 3.2), 4 (4.1, 4.2, 4.4)

5-YEAR PLAN

BARBADOS NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

RECOMMENDATION 1

Ensure that a portion of the international climate funding received at the national level is available to the DEM to support necessary mitigation and adaptation measures, especially where disaster risk reduction initiatives directly support climate change adaptation.

RECOMMENDATION 2

Increase communication and collaboration of all government ministries and departments engaged in the Emergency Management Advisory Council (EMAC) and National Emergency Management System (NEMS).

RECOMMENDATION 3

Promote evidence-based decision-making by supporting a centralized multi-agency data repository for disaster management, risk reduction, and resilience.

RECOMMENDATION 4

Promote evidence-based decision-making by supporting a centralized multi-agency data repository for disaster management, risk reduction, and resilience.

RECOMMENDATION 5

Conduct a comprehensive planning audit to identify necessary plans that do not exist and update existing plans that have become outdated.

RECOMMENDATION 6

Ensure that disaster management plans consider the complexities and potential cascading impacts associated with response to emergencies in densely populated communities and urban areas.

RECOMMENDATION 7

Utilize GIS-mapping capabilities and systems to address geospatial data and logistics to inform community-based disaster management and planning efforts.

RECOMMENDATION 8

Formulate and disseminate DM and DRR development plans and strategies to drive initiatives towards advanced capacity.

5-YEAR PLAN

BARBADOS NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

RECOMMENDATION 9

Formalize disaster training and exercise initiatives into a centralized official program, led and coordinated by the DEM.

RECOMMENDATION 10

Increase the annual budget to directly support the Department of Emergency Management's (DEM) growing need for technical staff and expanded programs required to meet the predicted escalation in climate-related hazards affecting Barbados.

RECOMMENDATION 11

Conduct a formal review of current building codes and propose additional codes if needed, in collaboration with the Department of Emergency Management (DEM), Ministry of Public Works - Barbados Building Authority, and Prime Minister's Office - Town Planning Department..

RECOMMENDATION 12

Expand awareness and preparedness campaigns among residents, visitors, and businesses for natural and manmade hazards affecting Barbados.

RECOMMENDATION 13

Expand the Tsunami Ready Programme to all parishes located within the Tsunami hazard zone.

RECOMMENDATION 14

Strengthen all-hazards monitoring and communications systems and data translation into comprehensive early warning systems (EWS) capabilities.

RECOMMENDATION 15

Export successes and lessons learned through Barbados' capacity-building efforts, including the Roofs to Reefs Programme, to support climate resilience and risk reduction actions nationally and internationally. Promote Barbados' gold-standard strategies and initiatives regionally and globally, including the Blue Green Bank (BGB), the Home Ownership Providing Energy (HOPE) Program, and the Bridgetown Initiative (BI).

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BARBADOS PARISH RISK PROFILES

SUBNATIONAL ASSESSMENT RESULTS

PARISH RISK PROFILES

The subnational report developed for each parish offers a more detailed understanding of risk in Barbados. These are provided separately from this report (linked below), and include drivers of vulnerability, coping capacity, and resilience; a comparison of each parish within the country; and strategic, data-driven, actionable recommendations.

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