ANTIGUA AND BARBUDA

NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

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

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- 911 Emergency Services
- Antigua and Barbuda Defence Force
- Antigua and Barbuda Fire Department
- Antigua and Barbuda International Institute of Technology (ABIIT)
- Antigua and Barbuda Red Cross
- Department of Environment
- Department of Gender Affairs
- District Disaster Sub-Committee
- Ministry of Agriculture, Fisheries & Barbuda Affairs
- Ministry of Education
- Ministry of Finance and the Economy
- Ministry of Foreign Affairs
- Ministry of Health
- Ministry of Works
- National Office of Disaster Services (NODS)
- Social Development
- Statistics Division

LIST OF ABBREVIATIONS

ABIIT: Antigua and Barbuda International Institute of Technology

BCP: Business Continuity Planning

CD Plans: Capacity Development Plans

CCRIF SPC: Caribbean Catastrophic Risk Insurance Facility Segregated Portfolio Company

CDM: Comprehensive Disaster Management

CDEMA: Caribbean Disaster Emergency Management Agency

COG: Continuity of Government

COP: Common Operating Picture

DM: Disaster Management

DMA: Disaster Management Analysis

DRM: Disaster Risk Management

DRR: Disaster Risk Reduction

EWS: Early Warning System

EOC: Emergency Operations Center

GIS: Geographic Information Systems

INDC: Intended Nationally Determined Contribution

MOU: Memorandum of Understanding

MMI: Modified Mercali Intensity

MTDS: Medium-Term Development Strategy

NDPBA: National Disaster Preparedness Baseline Assessment

NGO: Non-Governmental Organization

NODS: National Office of Disaster Services

PDC: Pacific Disaster Center

RVA: Risk and Vulnerability Assessment

SDGs: Sustainable Development Goals

SOP: Standard Operating Procedure

T&E: Training and Exercise

VPs: Vulnerable Populations

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TABLE OF CONTENTS

TABLE OF CONTENTS

NDPBA

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Pacific Disaster Center (PDC) completed the Antigua and Barbuda National Disaster Preparedness Baseline Assessment (NDPBA) in partnership with the National Office of Disaster Services (NODS) 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 NODS, 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 Antigua and Barbuda showed that the nation faces significant impacts due to hurricane winds, coastal flooding, and earthquakes, with nearly its entire population exposed. The RVA also revealed serious vulnerabilities, especially related to critical infrastructure such as hospitals and emergency services, intensified by low resilience in densely populated areas. A high exposure of built environment and critical infrastructure to multiple hazards also highlights the urgent need for risk reduction plans and policies.

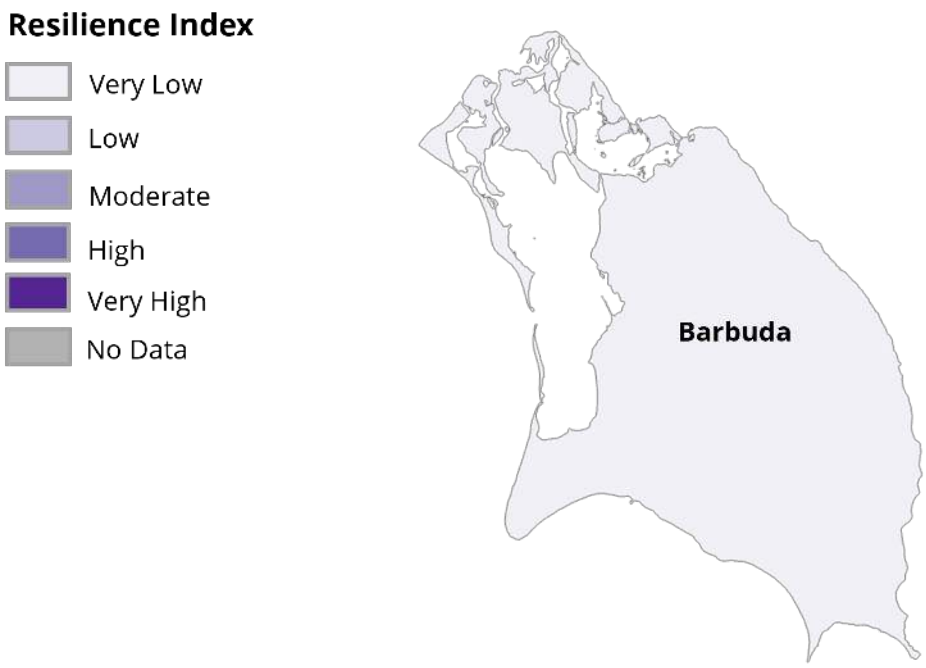
The DMA findings provide crucial insight into key areas of concern and success within Antigua and Barbuda's disaster management framework. Although notable progress has been made in areas such as Institutional Arrangements and Engaging Stakeholders through initiatives like the Tsunami Ready Programme, additional attention is needed in aspects related to the Enabling Environment. The movement of the draft Comprehensive Disaster Management (CDM) policy through the legislative process would advance capacities significantly. Another opportunity for improvement would be establishing increased communication and collaboration of all government ministries and departments engaged in disaster management. Additionally, the need for an improved volunteer management system to ensure effective recruiting, training, and tracking of volunteers within the District Disaster Committees was identified. When looking at Capabilities and Resources, the area most in need of support is funding for training and increased technical staff at NODS. Furthermore, enhancing the Communication and Information Management System to support informed decision-making would improve disaster response and recovery operations.

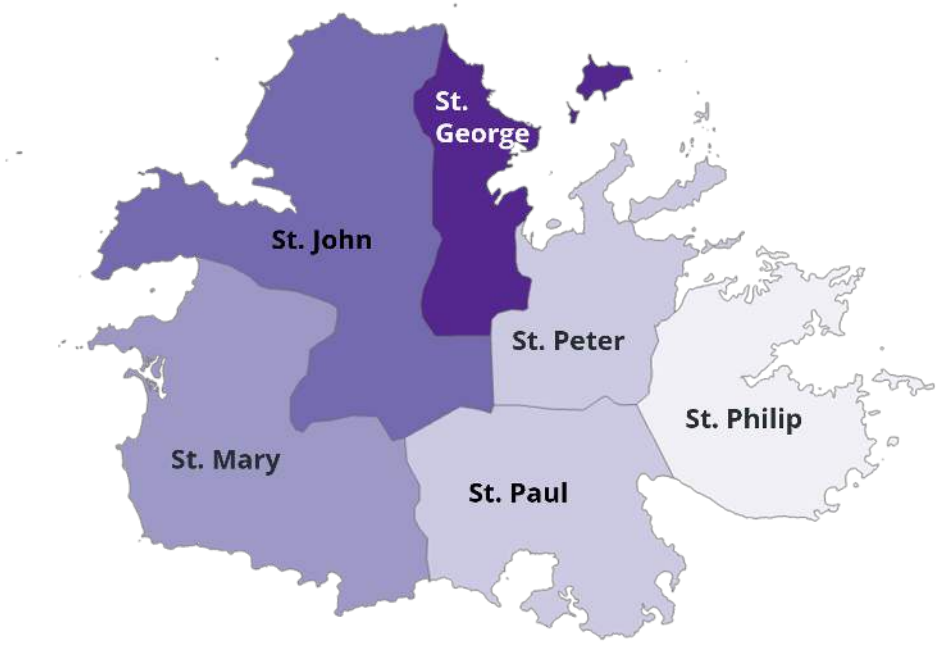
Antigua and Barbuda faces an increased risk from climate change, and with that a need to establish a national climate and disaster risk financing strategy. Implementing the recommendations shared in this report will significantly advance Antigua and Barbuda's preparedness and disaster management capabilities.

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 NODS was PDC's in-country partner during this project, PDC also developed relationships and with multiple government and non-governmental agencies in Antigua and Barbuda 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 all findings, recommendations, and data (tabular and spatial), developed for this analysis, please visit the PDC's DisasterAWARE platform at https://disasteraware.pdc.org/.

SUMMARY OF FINDINGS



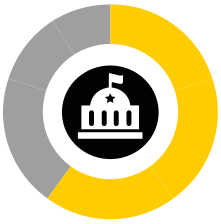


DISASTER MANAGEMENT ANALYSIS

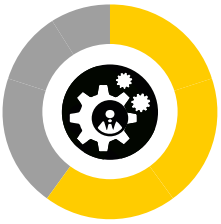
Limited or No Capacity
Early Capacity Development
Achievement with Significant Limitation
Substantial Progress with Some Limitation
Advanced Capacity

CURRENT STATUS

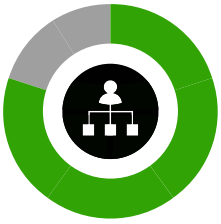
Limited or No Capacity — Advanced Capacity



Enabling Environment

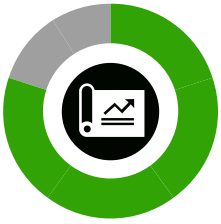


Capabilities and Resources

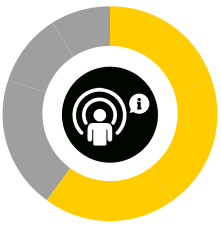


Institutional Arrangements

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 Antigua and Barbuda and key development and disaster management partners to enable a more robust and sustainable disaster risk-reduction effort in Antigua and Barbuda that will contribute to saving lives and property.

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

1. **Review and update the draft CDM policy** to strengthen the legal instruments necessary for effective disaster management.

2. **Increase the annual budget** for the National Office of Disaster Service's (NODS) to support the growing need for technical staff and expanded programs required to address the predicted rise in climate-related hazards in Antigua and Barbuda.

3. **Strengthen communication and collaboration** among all government ministries and departments involved in disaster management.

4. **Develop a national climate and disaster risk financing strategy** to promote long-term economic and financial stability while adapting to climate change.

5. **Conduct a comprehensive planning audit** to identify gaps in and among existing plans and update outdated plans.

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 geospatial data and logistics** to inform community-based disaster management and planning.

8 **Establish a centralized digital repository** within National Disaster Service's (NODS) for disaster Management (DM) supplies and resources to support strategic designation and streamline storage facility management across the country.

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

10 **Develop and distribute** disaster management (DM) and disaster risk reduction (DRR) development plans and strategies to drive initiatives towards advanced capacity.

11 **Create a volunteer policy** that establishes mechanisms and provisions for the successful integration of individuals and organizations into the national response system.

12 **Formalize disaster training** and exercise (T&E) initiatives into a centralized program, led and coordinated by the National Office of Disaster Service's (NODS).

13 **Strengthen Antigua and Barbuda's agricultural sector** to withstand climate-related challenges by promoting sustainable practices, resilient infrastructure, and adaptive strategies to maintain continuity and productivity during adverse events.

14 **Expand awareness** and preparedness campaigns for residents, visitors, and businesses about natural and human-caused hazards in Antigua and Barbuda.

15 **Expand the Tsunami Ready Progamme** to all parishes within tsunami hazard zones.

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

17 **Pursue opportunities** to share successes and lessons learned from Antigua and Barbuda's capacity-building efforts, including the Tsunami Ready Programme and Safe School Initiative, to support climate resilience and risk reduction strategies nationally and internationally.

NDPBA

COUNTRY BACKGROUND

GEOGRAPHY

280 km²
Antigua Land area

161 km²
Barbuda Land area

443 km²
Total Land area (including Redonda)

153 km
Coastline length

42 km
Distance between the islands of Antigua and Barbuda

49 km
Distance between the island of Antigua and Redonda

6 parishes & 2 dependencies
Number of administrative units

Admin	Designation
Saint George	parish
Saint Philip	parish
Saint John	parish
Redonda	dependency
Saint Paul	parish
Saint Peter	parish
Barbuda	dependency
Saint Mary	parish

Saint John's
Capital City
(seat of government, commercial center, and Antigua's main port)

ACCESS TO INFORMATION

99%
Adjusted net enrollment in primary school

96%
Individuals using the Internet

99%
Adult literacy rate

DEMOGRAPHICS

100,772
Total population

24.3%
Urban population

87.3%	African descent
4.7%	Mixed
2.7%	Hispanic
1.6%	White
2.7%	Other
0.9%	Unspecified

98%
of total population lives in Antigua

0.59%
Annual population growth

2.8
Physicians per 1k people

9.1
Nurses and midwives per 1k people

3.29
Hospital beds per 1k people

79.24
Life expectancy in years

5
Infant mortality rate per 1k live births

21
Maternal mortality rate per 100k live births

92%
DTP3 immunization coverage of children under 1 year

ECONOMY

GDP and key exports

$1.76 billion
Gross domestic product (GDP) in current prices

$21,010
GDP per capita (US$), PPP adjusted

8.5%
Annual GDP growth

+5.4%
CPI Inflation rate

$34,590,023
Remittances received 2022

47% of GDP
Accounts for tourism

18%
People living below the national poverty line (EC$6,318 or US$2,366)

Major exports

- Waste/scrap precious metals
- Refined petroleum
- Whiskey
- Fish/crustaceans
- Jewelry

Primary economic sectors (% of GDP)

64.49%
Services sector

21.89%
Industry

2.16%
Agriculture

KEY INFRASTRUCTURE

Transportation and Other Key Infrastructure

ANTIGUA

- **1** Medium airports
- **1** Medium seaports
- **2** Heliports
- **62** Bridges
- **5** Hospitals and Health Centers
- **18** Communication towers
- **54** Clinics
- **5** Water and wastewater facilities
- **16** Dams

BARBUDA

- **2** Small airports
- **2** Small seaports
- **1** Heliport
- **22** Very small seaports
- **5** Hospitals and Health Centers
- **2** Bridges

Emergency Services

ANTIGUA

- **16** Police stations
- **5** Fire stations
- **53** Shelters
- **1** EOCs

BARBUDA

- **1** Police station
- **1** Fire station
- **1** Shelter
- **1** EOC

DISASTER MANAGEMENT

Major capacity improvements/milestones:

In 2017, Antigua and Barbuda signed the Declaration of School Safety. Serving as a pivotal document, this declaration forms the cornerstone for the systematic implementation of strategies aimed at disaster risk reduction and the enhancement of climate change resilience within the broader context of the Caribbean Safe School Initiative.

In 2020, St. John's, Antigua and Barbuda, received recognition for completing and adhering to the Tsunami Ready Programme. 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.

DROUGHT (1983)
Deaths: *
Affected: 75,000
Losses: $*

TROPICAL CYCLONE HUGO (1989)
Deaths: 2
Affected: 8,030
Losses: $189 million

TROPICAL CYCLONE LUIS (1995)
Deaths: 2
Affected: 3,702
Losses: $672 million

TROPICAL CYCLONE GEORGES (1998)
Deaths: 2
Affected: 2,025
Losses: $180 million

TROPICAL CYCLONE JOSE (1999)
Deaths: 1
Affected: 2,534
Losses: $*

TROPICAL CYCLONE LENNY (1999)
Deaths: 1
Affected: 3,423
Losses: $*
Contamination of freshwater supplies.

TROPICAL CYCLONE OMAR (2008)
Deaths: *
Affected: 25,800
Losses: $*

TROPICAL CYCLONE EARL (2010)
Deaths: *
Affected: 5,000
Losses: $17 million

TROPICAL CYCLONE IRMA (2017)
Deaths: 1
Affected: 1,800
Losses: $298 million

THE RVA

RISK AND VULNERABILITY ASSESSMENT RESULTS

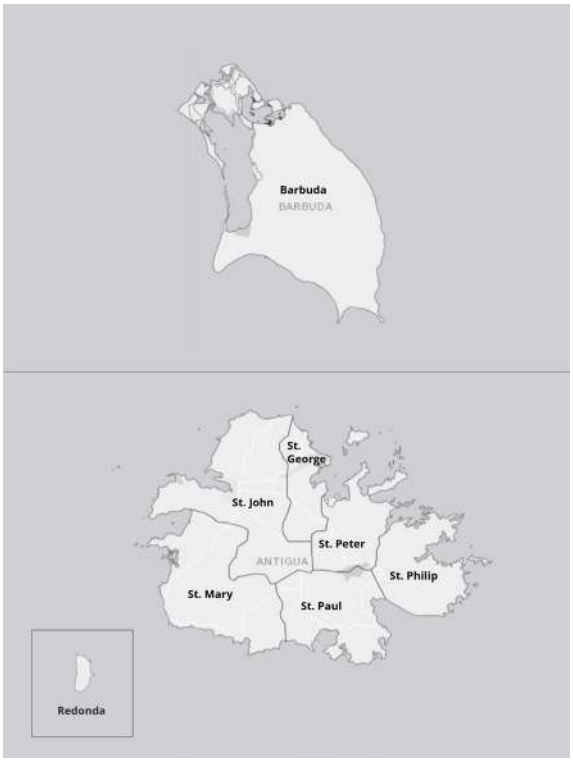
RISK AND VULNERABILITY

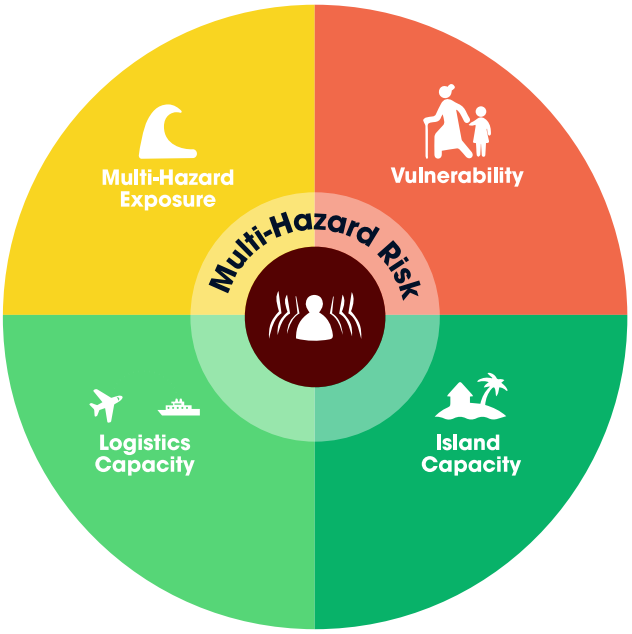
ASSESSMENT RESULTS

Provided in this section are the results of the Risk and Vulnerability Assessment (RVA) 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

ANTIGUA AND BARBUDA





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)

39 OUT OF 216 COUNTRIES / TERRITORIES ASSESSED

Regional Climate Exposure 2050 Rank (PDC Regional Climate Assessment)

10 OUT OF 20 COUNTRIES / TERRITORIES ASSESSED

ANTIGUA AND BARBUDA HAZARD ZONES

COASTAL FLOODING

1.7% Relative Population Exposure

1,663 Raw Population Exposure

Exposed: **2.5%** Built Environment **19%** Crit. Infrastructure

EARTHQUAKE

100% Relative Population Exposure

96,700 Raw Population Exposure

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

LANDSLIDE

14% Relative Population Exposure

13,472 Raw Population Exposure

Exposed: **15%** Built Environment **18%** Crit. Infrastructure

SEA LEVEL RISE

1.3% Relative Population Exposure

1,226 Raw Population Exposure

Exposed: **1.8%** Built Environment **16%** Crit. Infrastructure

HURRICANE WINDS

100% Relative Population Exposure

96,700 Raw Population Exposure

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

TSUNAMI

10% Relative Population Exposure

9,805 Raw Population Exposure

Exposed: **13%** Built Environment **33%** Crit. Infrastructure

WILDFIRE

3% Relative Population Exposure

2,708 Raw Population Exposure

Exposed: **2%** Built Environment **3%** Crit. Infrastructure

FLOOD

62% Relative Population Exposure

59,675 Raw Population Exposure

Exposed: **65%** Built Environment **60%** Crit. Infrastructure

EXTREME HEAT

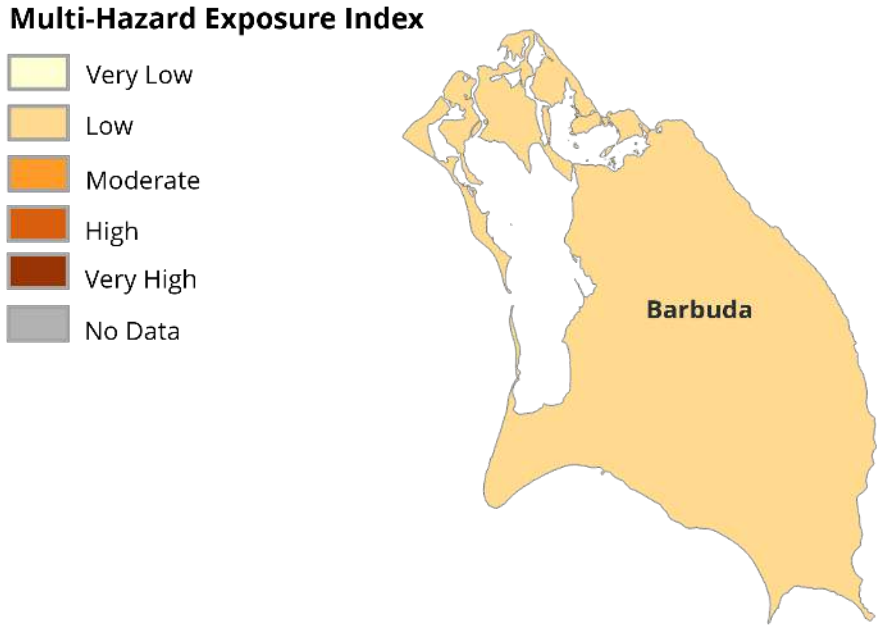
100% Relative Population Exposure

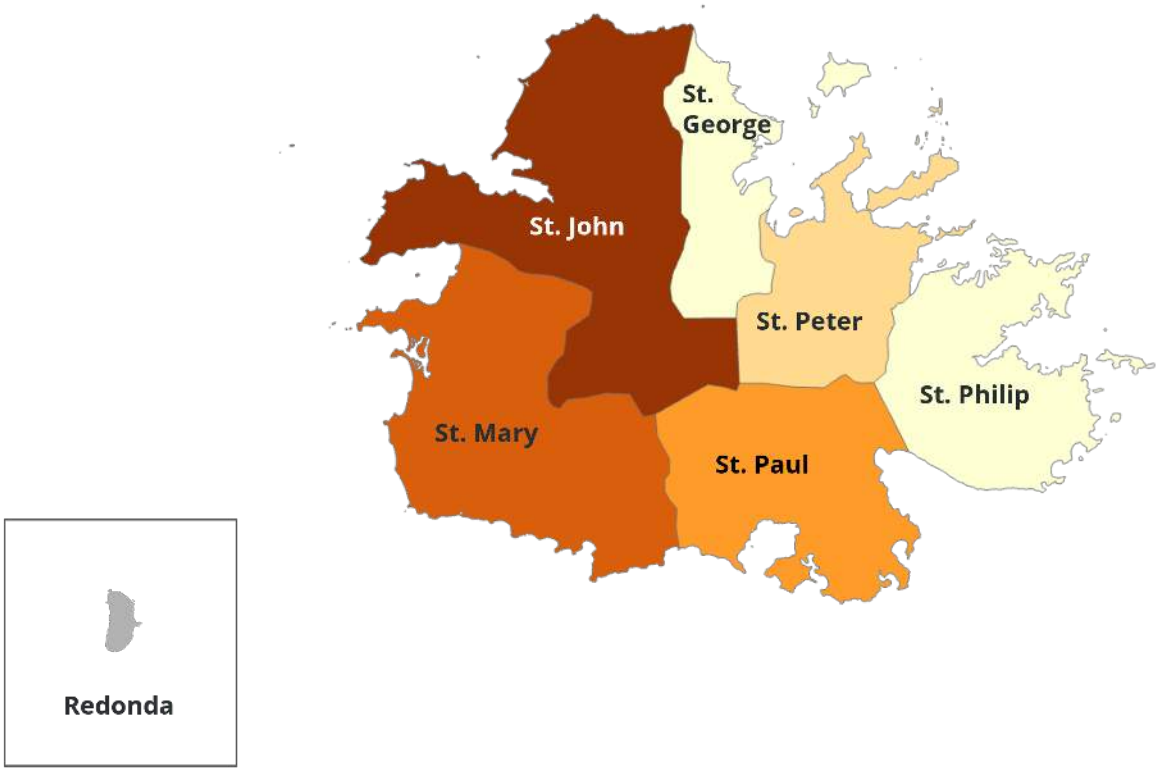
96,700 Raw Population Exposure

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

MULTI-HAZARD EXPOSURE BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint John	0.748
HIGH	2	Saint Mary	0.569
MODERATE	3	Saint Paul	0.520
LOW	4	Barbuda	0.443
LOW	5	Saint Peter	0.156
VERY LOW	6	Saint George	0.130
VERY LOW	7	Saint Philip	0.026
NO DATA	-	Redonda	-


Multi-Hazard Exposure Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

Antigua & Barbuda: Coastal Flooding Hazard Exposure

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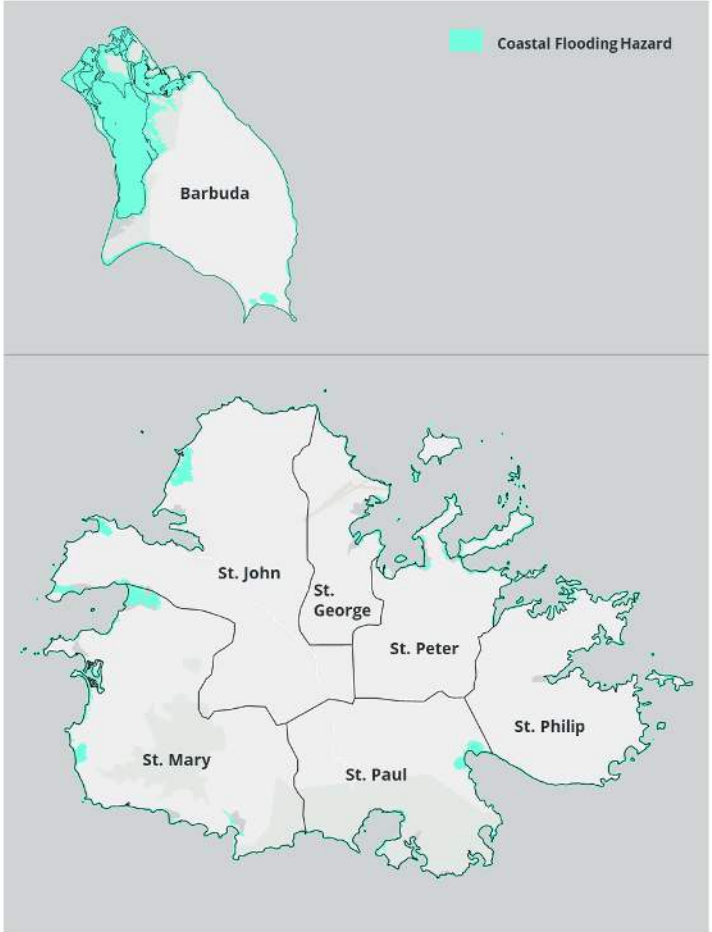
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

1,663 (1.7%)

People exposed to coastal flooding

POTENTIAL BUILT ENVIRONMENT EXPOSURE

1,084 (2.5%)

Built environment exposed to coastal flooding

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (33%) Airports and Heliports	**30** (100%) Seaports	**0** (0%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**0** (0%) Shelters	**2** (3%) Hospitals & Clinics
0 (0%) Waste Management	**59** (42%) Hotels & Resorts	**0** (0%) Fire Stations	**0** (0%) Police Stations	**0** (0%) Power Plants	**4** (6%) Bridges	**2** (40%) Fuel Terminals and Storage

Antigua & Barbuda: Earthquake Hazard Exposure

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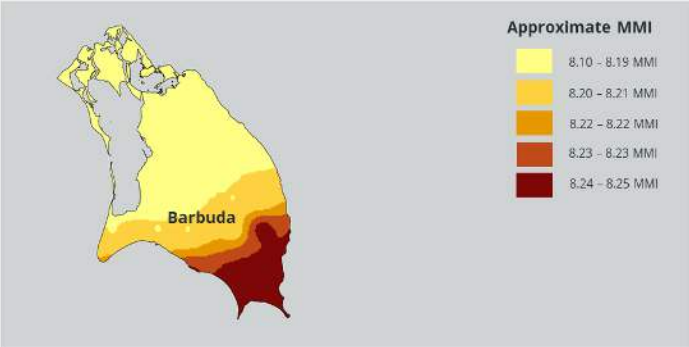
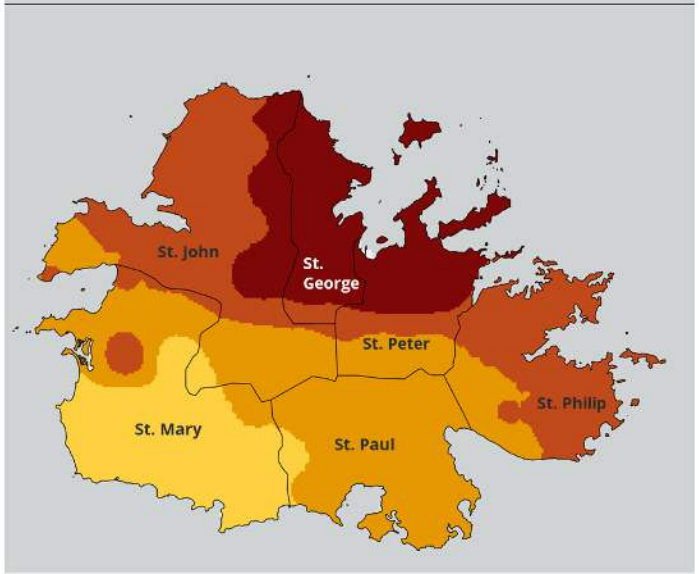
VIEW IN DISASTERAWARE





POTENTIAL POPULATION EXPOSURE

96,700 (100%)

People exposed to earthquakes of an estimated MMI VIII and above

POTENTIAL BUILT ENVIRONMENT EXPOSURE

44,175 (100%)

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

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

6 (100%) Airports and Heliports	**30** (100%) Seaports	**68** (100%) Schools & Colleges	**1** (100%) EOCs	**2** (100%) Warehouses	**54** (100%) Shelters	**60** (100%) Hospitals & Clinics
3 (100%) Waste Management	**141** (100%) Hotels & Resorts	**6** (100%) Fire Stations	**17** (100%) Police Stations	**8** (100%) Power Plants	**64** (100%) Bridges	**19** (100%) Water Infrastructure

Antigua & Barbuda: Landslide Hazard Exposure

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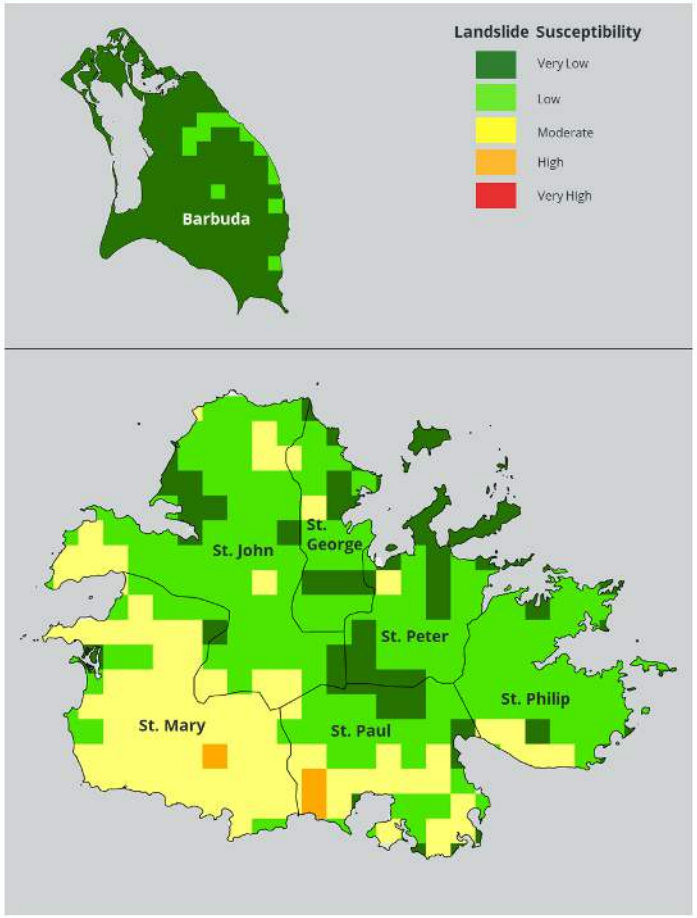
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

13,472 (14%)

People exposed to moderate to high landslide susceptibility

POTENTIAL BUILT ENVIRONMENT EXPOSURE

6,591 (15%)

Built environment exposed to moderate to high landslide susceptibility

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

1 (17%) Airports and Heliports	2 (7%) Seaports	8 (12%) Schools & Colleges	0 (0%) EOCs	0 (0%) Warehouses	12 (22%) Shelters	4 (7%) Hospitals & Clinics
0 (0%) Waste Management	43 (30%) Hotels & Resorts	1 (17%) Fire Stations	3 (18%) Police Stations	0 (0%) Power Plants	2 (3%) Bridges	8 (42%) Water Infrastructure

Antigua & Barbuda: Sea Level Rise Hazard Exposure

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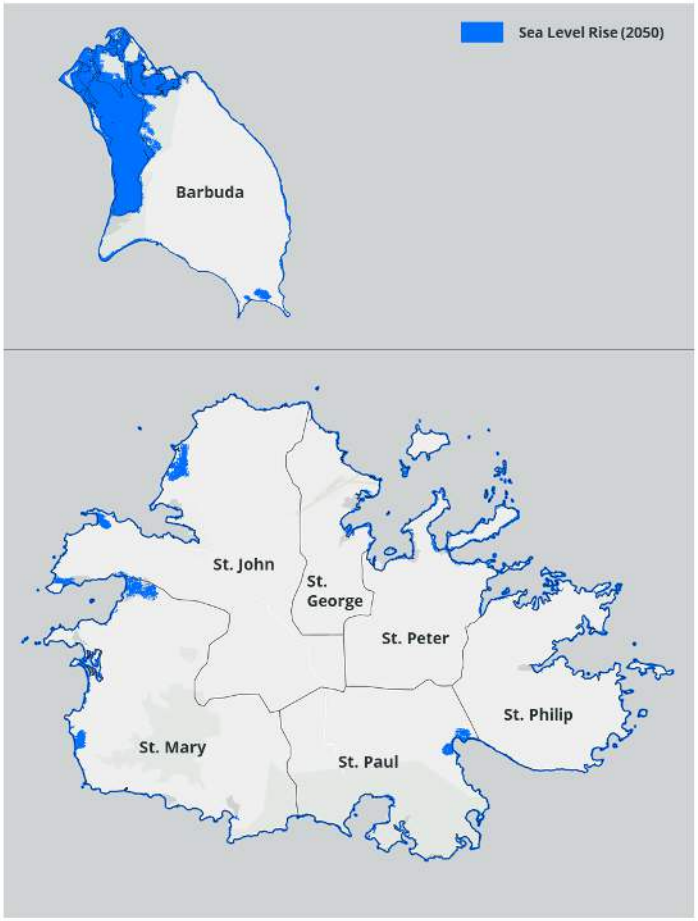

POTENTIAL POPULATION EXPOSURE

1,226 (1.3%)

People exposed to sea level rise by 2050

POTENTIAL BUILT ENVIRONMENT EXPOSURE

811 (1.8%)

Built environment exposed to sea level rise by 2050

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

2 (33%) Airports and Heliports	**30** (100%) Seaports	**0** (0%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**0** (0%) Shelters	**1** (2%) Hospitals & Clinics
0 (0%) Waste Management	**45** (32%) Hotels & Resorts	**0** (0%) Fire Stations	**0** (0%) Police Stations	**0** (0%) Power Plants	**4** (6%) Bridges	**2** (40%) Fuel Terminals and Storage

Antigua & Barbuda: Hurricane Wind Hazard Exposure

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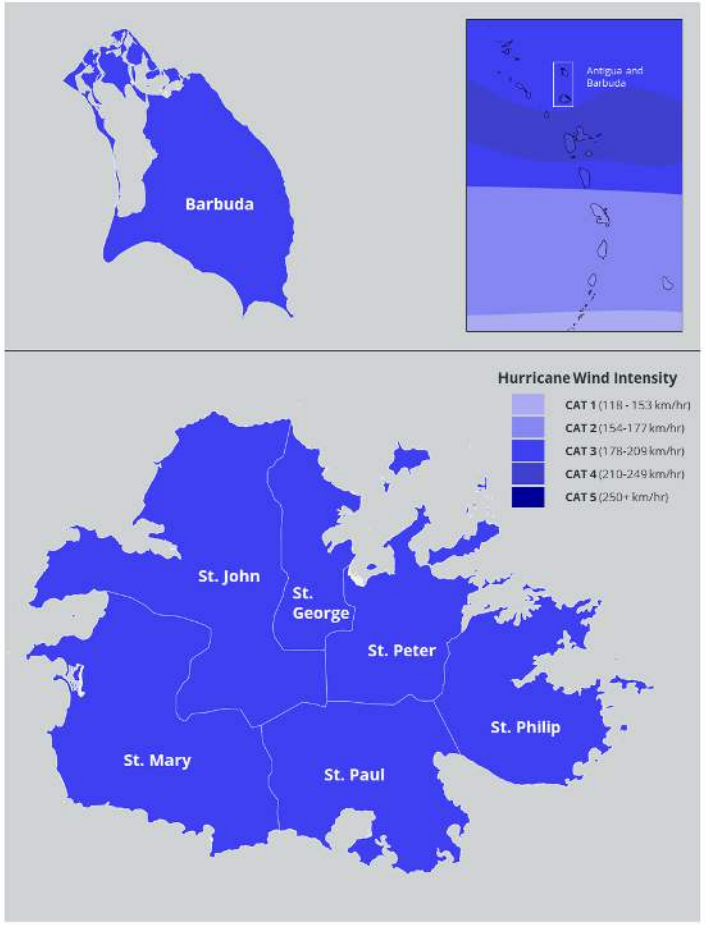
VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

96,700 (100%)

People exposed to hurricane force winds Category 3 and above

POTENTIAL BUILT ENVIRONMENT EXPOSURE

44,175 (100%)

Built environment exposed to hurricane winds Category 3 and above

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

6 (100%) Airports and Heliports	**30** (100%) Seaports	**68** (100%) Schools & Colleges	**1** (100%) EOCs	**2** (100%) Warehouses	**54** (100%) Shelters	**60** (100%) Hospitals & Clinics
3 (100%) Waste Management	**141** (100%) Hotels & Resorts	**6** (100%) Fire Stations	**17** (100%) Police Stations	**8** (100%) Power Plants	**64** (100%) Bridges	**19** (100%) Water Infrastructure

Antigua & Barbuda: Tsunami Hazard Exposure

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VIEW IN DISASTERAWARE

POTENTIAL POPULATION EXPOSURE

9,805 (10%)
People exposed to tsunami

POTENTIAL BUILT ENVIRONMENT EXPOSURE

5,613 (13%)
Built environment exposed to tsunami

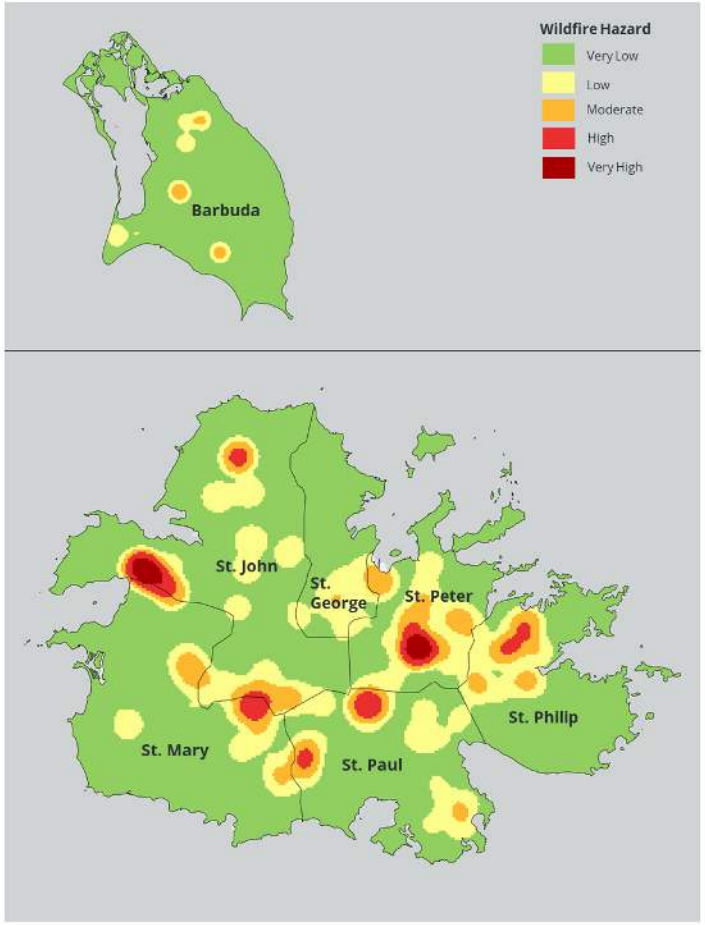
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

5 (83%) Airports and Heliports	**30** (100%) Seaports	**10** (15%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**4** (7%) Shelters	**7** (12%) Hospitals & Clinics
1 (33%) Waste Management	**71** (50%) Hotels & Resorts	**1** (17%) Fire Stations	**1** (6%) Police Stations	**2** (25%) Power Plants	**31** (48%) Bridges	**5** (26%) Water Infrastructure

Antigua & Barbuda: Wildfire Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

2,708 (3%)
People exposed to wildfire
(moderate to very high severity)

POTENTIAL BUILT ENVIRONMENT EXPOSURE

976 (2%)
Built environment exposed to wildfire
(moderate to very high severity)

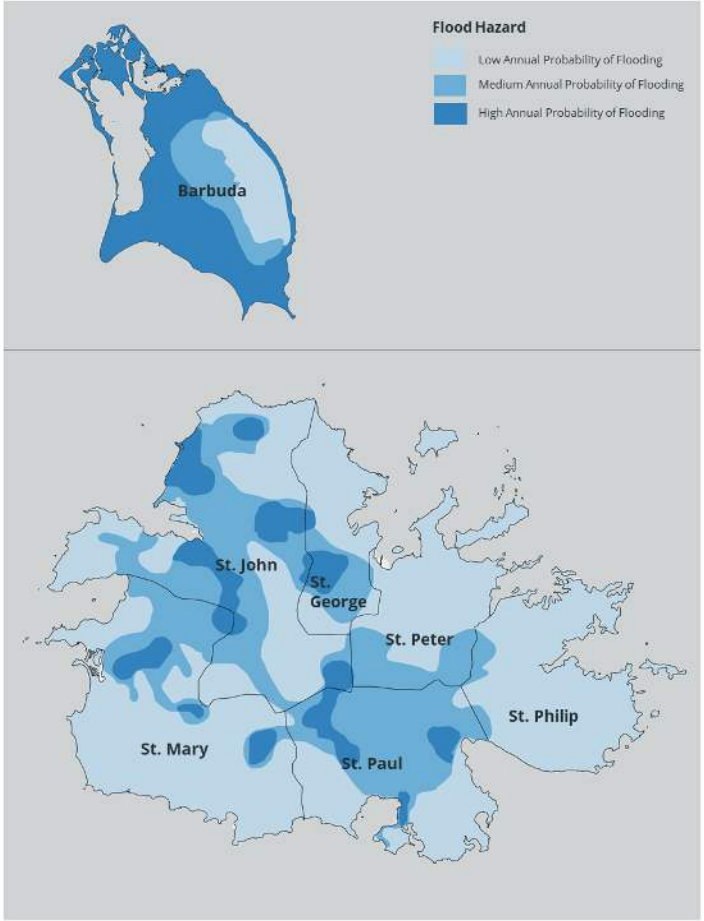
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

0 (0%) Airports and Heliports	**0** (0%) Seaports	**2** (3%) Schools & Colleges	**0** (0%) EOCs	**0** (0%) Warehouses	**3** (6%) Shelters	**0** (0%) Hospitals & Clinics
1 (33%) Waste Management	**1** (<1%) Hotels & Resorts	**0** (0%) Fire Stations	**0** (0%) Police Stations	**0** (0%) Power Plants	**0** (0%) Bridges	**1** (5%) Water Infrastructure

Antigua & Barbuda: Flood Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

59,675 (62%)
People exposed to moderate or high flooding

POTENTIAL BUILT ENVIRONMENT EXPOSURE

28,609 (65%)
Built environment exposed to moderate or high flooding

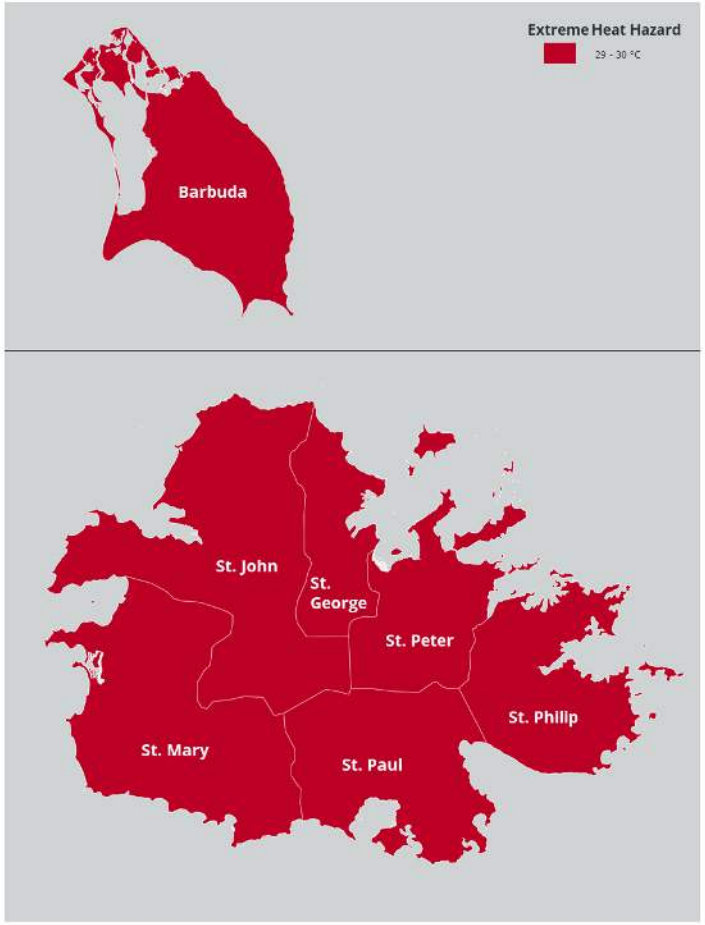
CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

4 (67%) Airports and Heliports	**8** (27%) Seaports	**47** (69%) Schools & Colleges	**1** (100%) EOCs	**2** (100%) Warehouses	**34** (63%) Shelters	**53** (88%) Hospitals & Clinics
1 (33%) Waste Management	**49** (35%) Hotels & Resorts	**4** (67%) Fire Stations	**8** (47%) Police Stations	**4** (50%) Power Plants	**59** (92%) Bridges	**13** (81%) Dams

Antigua & Barbuda: Extreme Heat Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



POTENTIAL POPULATION EXPOSURE

96,700 (100%)

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

POTENTIAL BUILT ENVIRONMENT EXPOSURE

44,175 (100%)

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

CRITICAL INFRASTRUCTURE AND ASSETS EXPOSED

6 (100%) Airports and Heliports	**30** (100%) Seaports	**68** (100%) Schools & Colleges	**1** (100%) EOCs	**2** (100%) Warehouses	**54** (100%) Shelters	**60** (100%) Hospitals & Clinics
3 (100%) Waste Management	**141** (100%) Hotels & Resorts	**6** (100%) Fire Stations	**17** (100%) Police Stations	**8** (100%) Power Plants	**64** (100%) Bridges	**19** (100%) Water Infrastructure

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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)

85 OUT OF 204 COUNTRIES / TERRITORIES ASSESSED

VULNERABILITY SUBCOMPONENTS AND INDICATORS

Information Access Vulnerability
Household Access to Internet
Household Access to TV
Household Access to Radio
Households without Computer
Adults with Less than Secondary Education

Environmental Stress
Coastline Exposure to Local/Global Threats
Tree Cover Loss

Household Composition and Vulnerable Health
Population Aged 65 and Older
Population Under Age 15
Prevalence of Chronic Illness
Prevalence of Disability

Population Pressures
Average Annual Population Change
Population Density

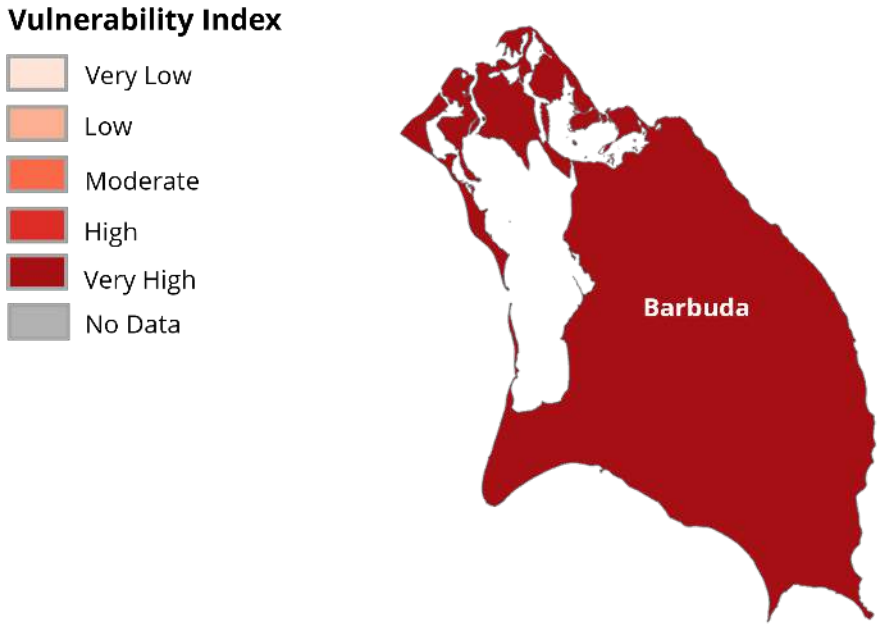
Economic Constraints
Economic Dependency Ratio
Unemployment Rate
Labor Force Participation
Population Receiving Remittances

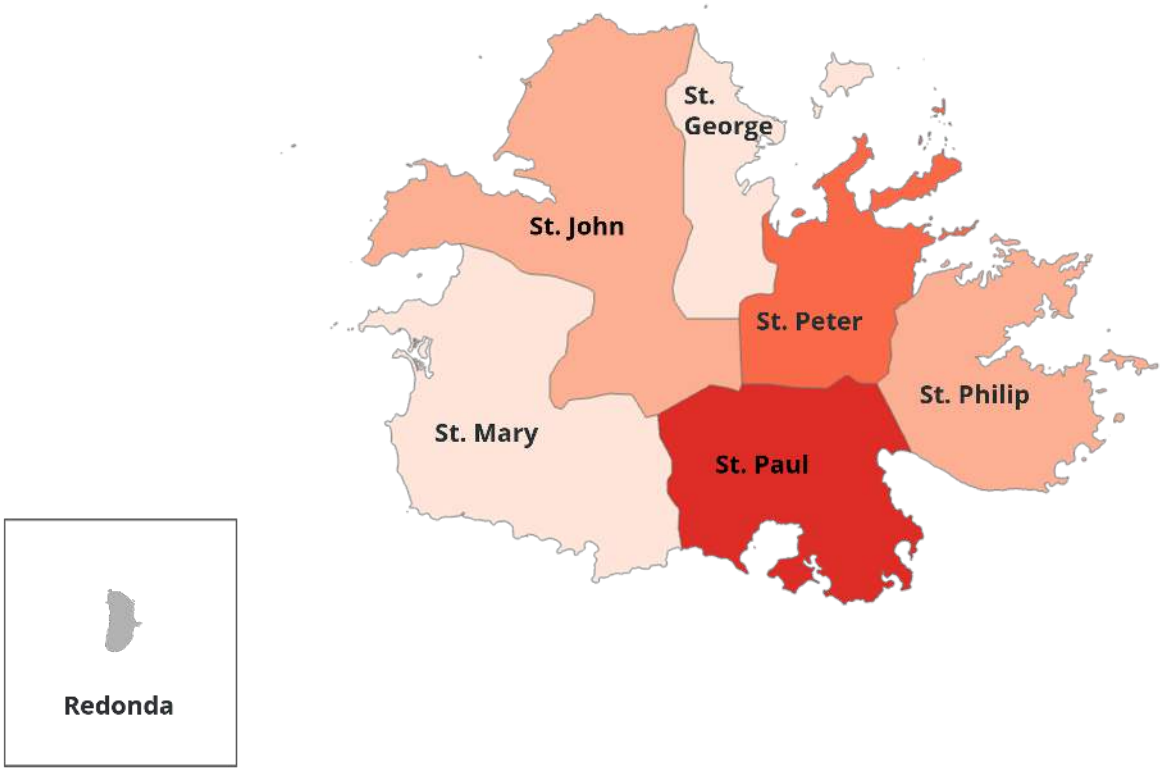
Gender Inequality
Female to Male Labor Participation
Parity in Secondary Education Attainment

Housing and Transportation Vulnerability
Household Overcrowding
Housing Built Prior to 2000
Households without a Private Vehicle Population with Unmet Housing Need

VULNERABILITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Barbuda	0.558
HIGH	2	Saint Paul	0.407
MODERATE	3	Saint Peter	0.376
LOW	4	Saint Philip	0.363
LOW	5	Saint John	0.350
VERY LOW	6	Saint Mary	0.347
VERY LOW	7	Saint George	0.330
NO DATA	-	Redonda	-


Vulnerability Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

THE RVA

ISLAND CAPACITY

ISLAND CAPACITY

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

ISLAND CAPACITY SUBCOMPONENTS AND INDICATORS

Environmental Capacity
Protected Terrestrial Areas
Protected Coastlines
Net Carbon Flux
Croplands

Communications Capacity
Households with Mobile Phones
Households with Fixed Phones

Energy Capacity
Electric Lighting Access
Households Using Gas for Cooking
Households with Generator

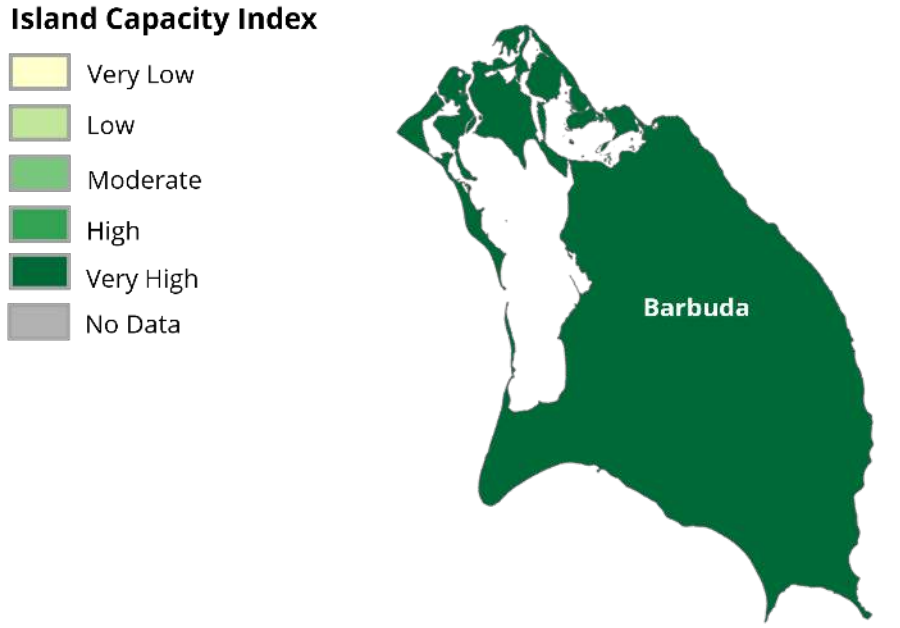
Governance
Households with Garbage Pickup
Prevalence of Crime

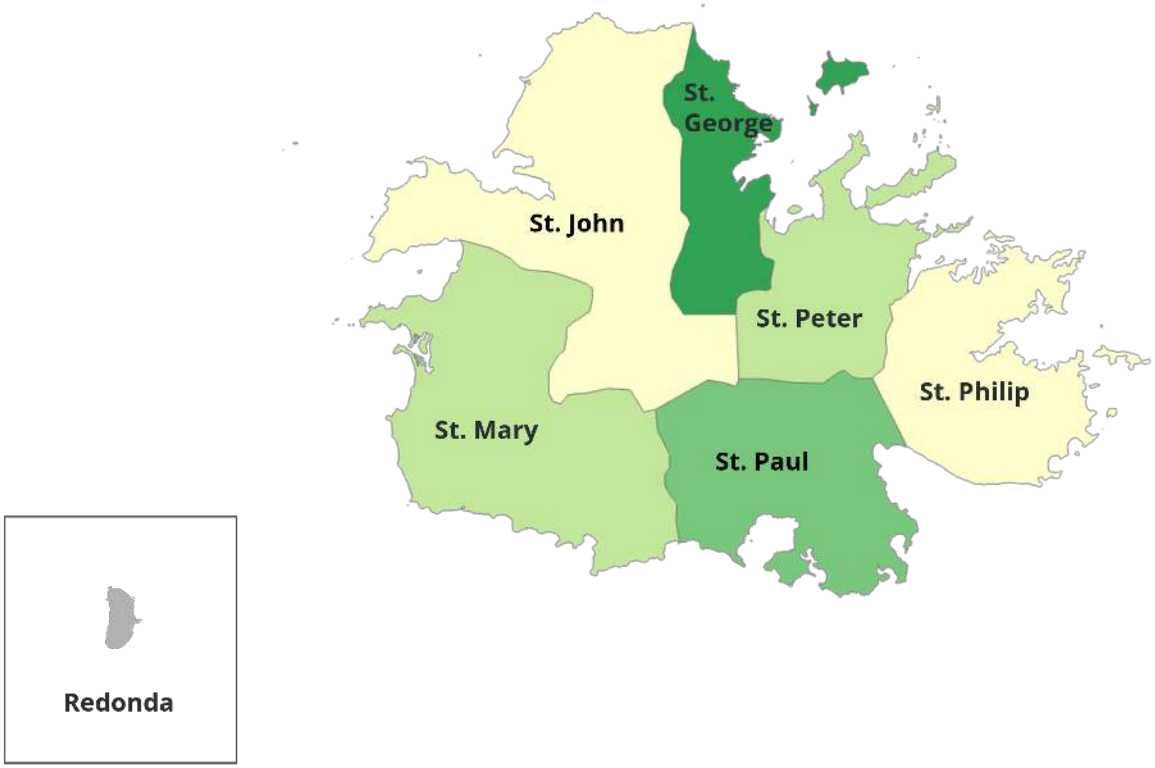
Health Care Capacity
Hospitals and Clinics per 1,000 Persons
Health Insurance Coverage

Emergency Services Capacity
Average Distance to Police Station
Average Distance to Fire Station
Average Distance to Hospital or Clinic
Average Distance to Shelter

ISLAND CAPACITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Barbuda	0.760
HIGH	2	Saint George	0.637
MODERATE	3	Saint Paul	0.606
LOW	4	Saint Mary	0.526
	5	Saint Peter	0.519
VERY LOW	6	Saint John	0.476
	7	Saint Philip	0.254
NO DATA	-	Redonda	-


Island Capacity Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

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

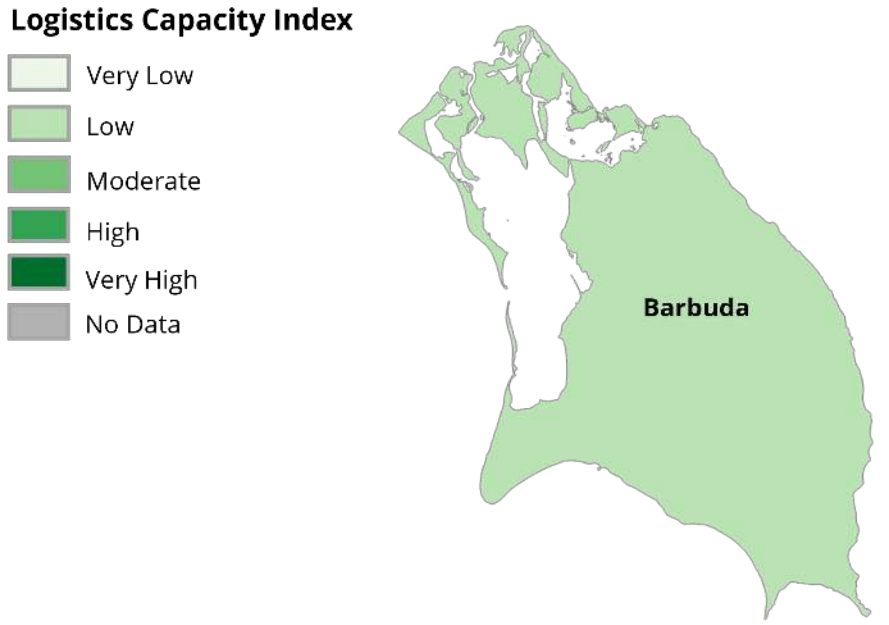
Transportation Capacity
Road Density
Gas Stations per 1,000 Persons

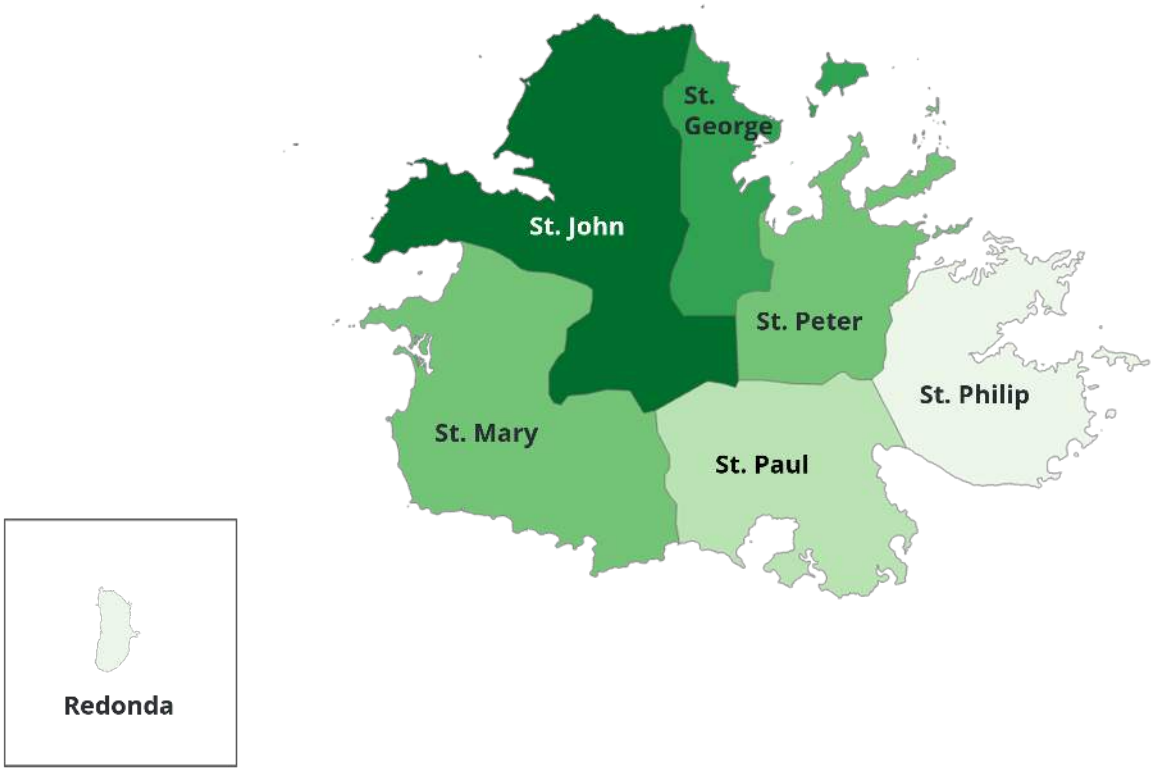
Air Support
Average Distance to Airport or Heliport
Distance to External C130 Airport

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 John	0.674
HIGH	2	Saint George	0.640
MEDIUM	3	Saint Mary	0.485
	4	Saint Peter	0.485
LOW	5	Saint Paul	0.471
	6	Barbuda	0.463
VERY LOW	7	Saint Philip	0.394
	8	Redonda	0.315


Logistics Capacity Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

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)

58 OUT OF 198 COUNTRIES / TERRITORIES ASSESSED

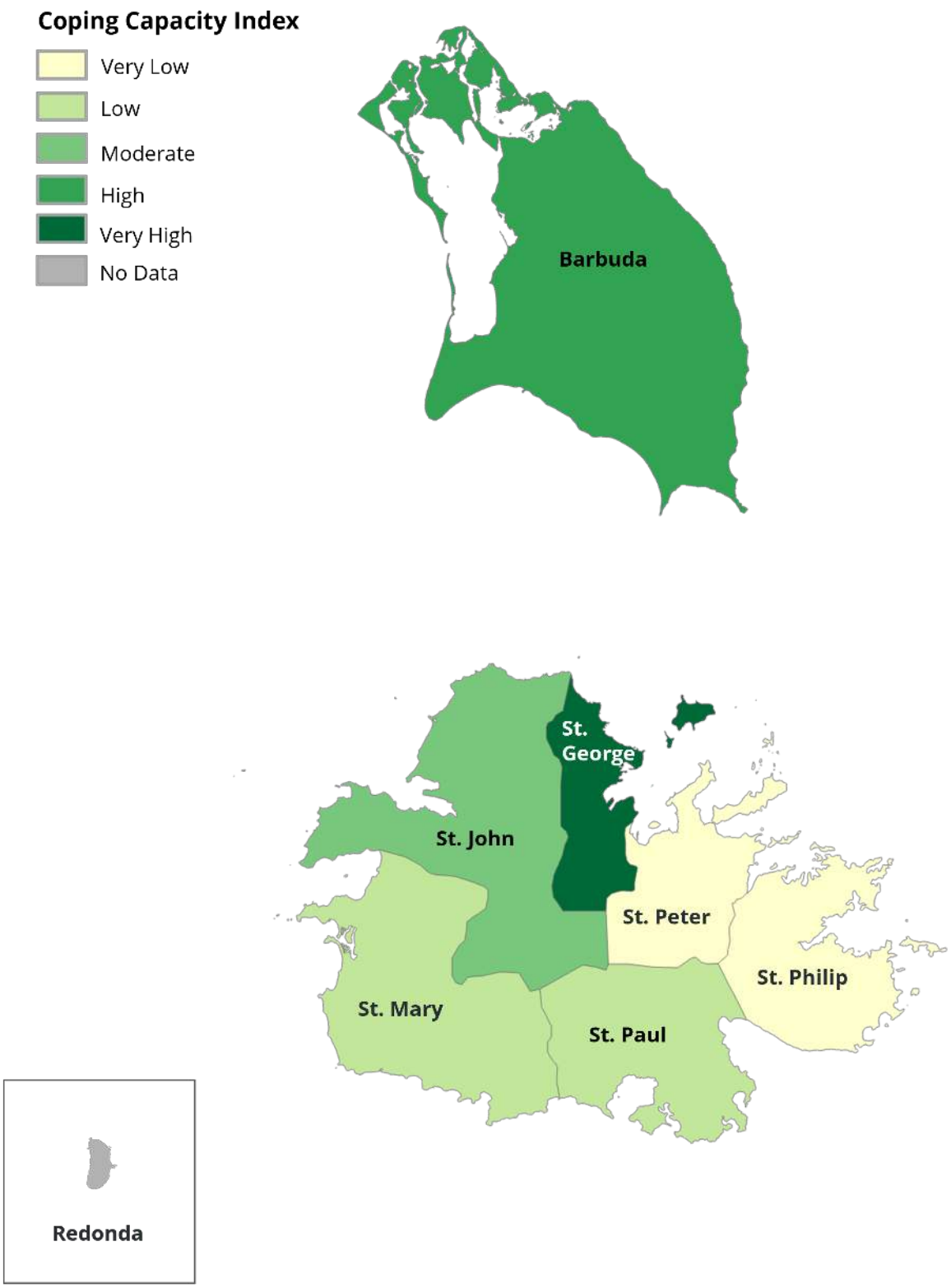
COPING CAPACITY COMPONENTS

Island Capacity

Logistics Capacity

COPING CAPACITY BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint George	0.638
HIGH	2	Barbuda	0.612
MODERATE	3	Saint John	0.575
LOW	4	Saint Paul	0.539
	5	Saint Mary	0.505
VERY LOW	6	Saint Peter	0.502
	7	Saint Philip	0.324
NO DATA	-	Redonda	-


Coping Capacity Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda
St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

THE RVA

RESILIENCE

RESILIENCE

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

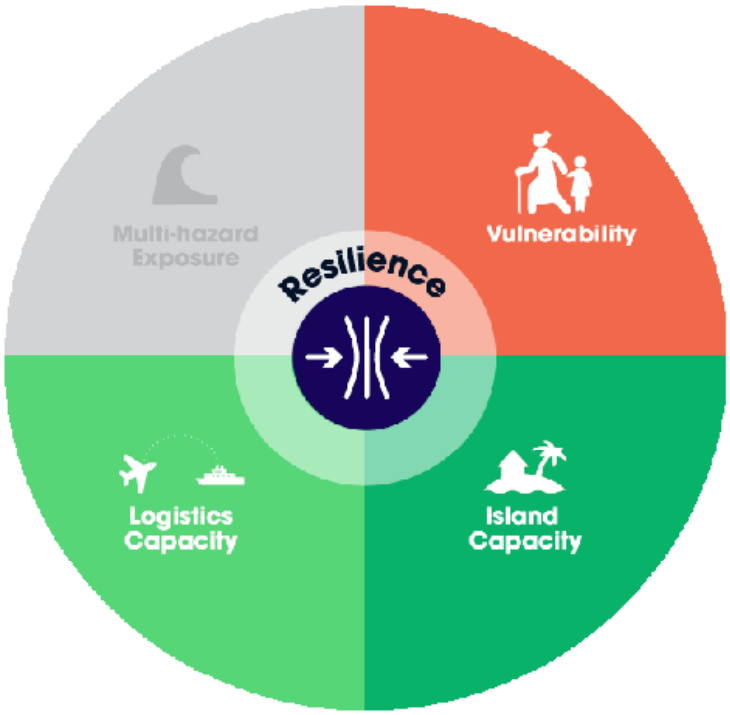
Global Resilience Rank (PDC Global RVA)

71 OUT OF 194 COUNTRIES / TERRITORIES ASSESSED

Regional Climate Resilience Rank (PDC Regional Climate Assessment)

4 OUT OF 15 COUNTRIES

RESILIENCE COMPONENTS



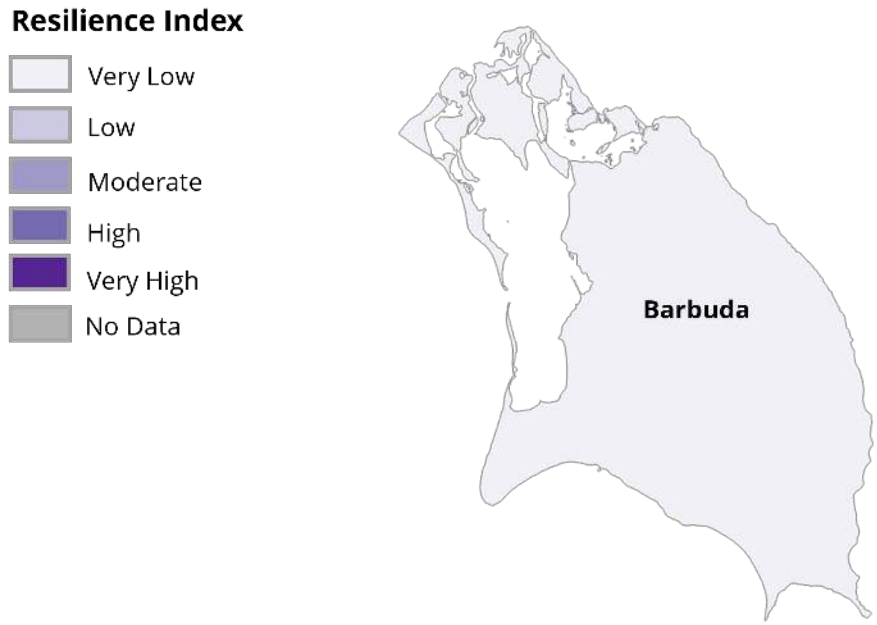
Vulnerability

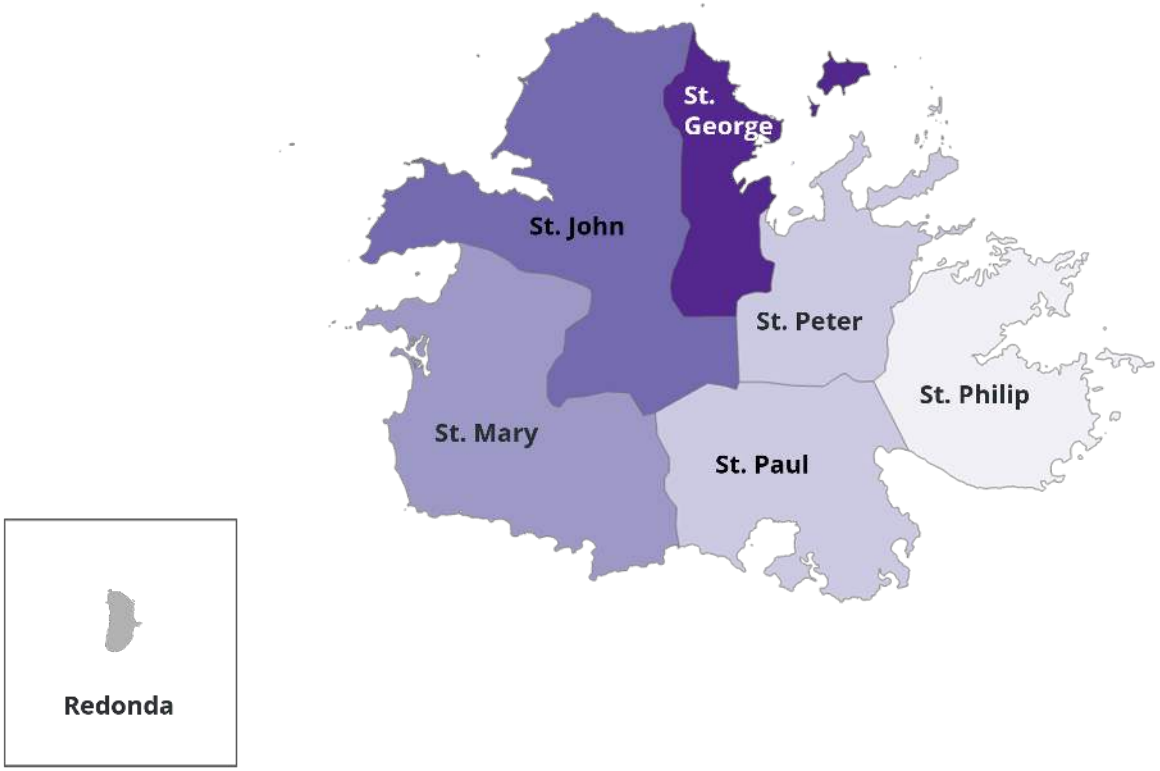
Island Capacity

Logistics Capacity

RESILIENCE BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint George	0.654
HIGH	2	Saint John	0.613
MODERATE	3	Saint Mary	0.579
LOW	4	Saint Paul	0.566
	5	Saint Peter	0.563
VERY LOW	6	Barbuda	0.527
	7	Saint Philip	0.481
NO DATA	-	Redonda	-


Resilience Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

THE RVA

MULTI-HAZARD RISK

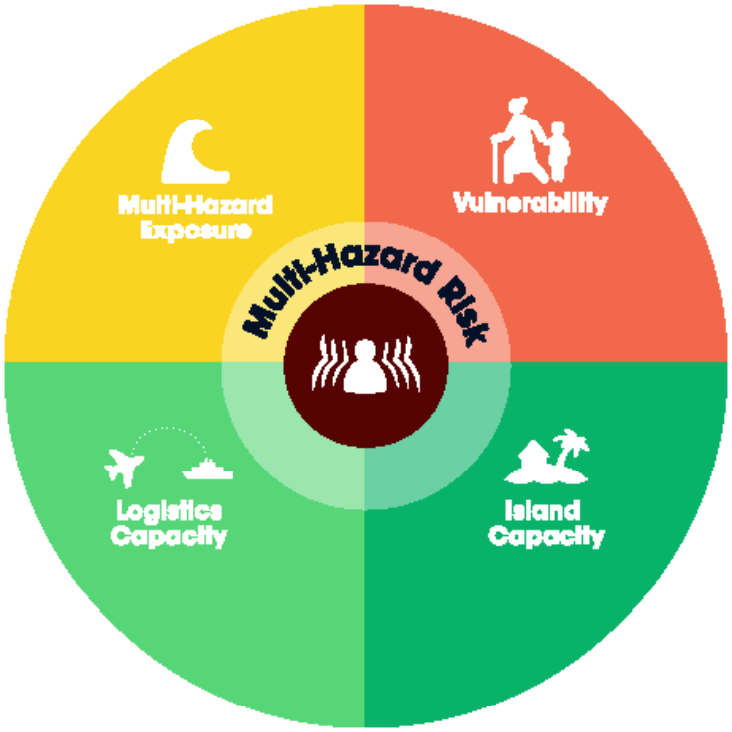
MULTI-HAZARD RISK

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 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) **91** **OUT OF 193 COUNTRIES / TERRITORIES ASSESSED**

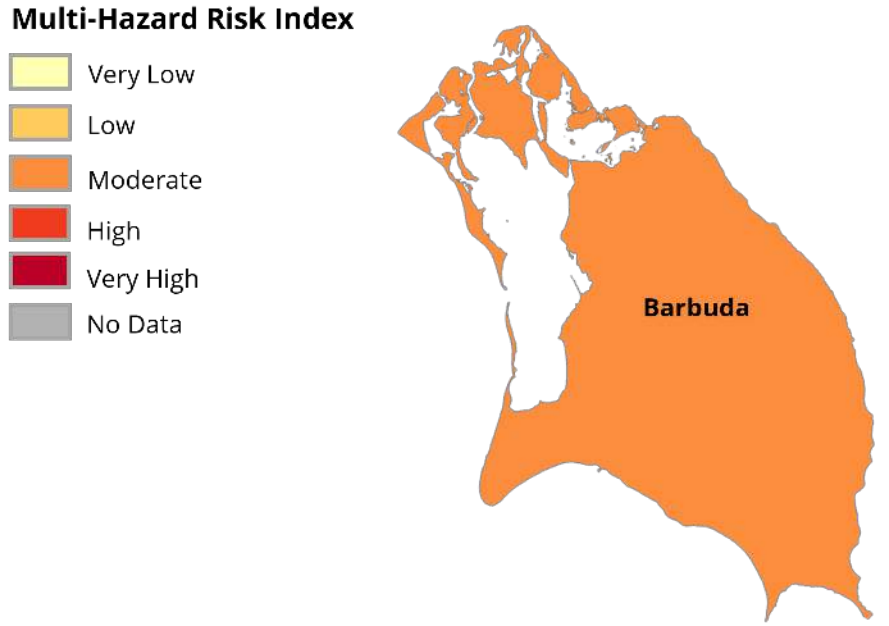
MULTI-HAZARD RISK COMPONENTS

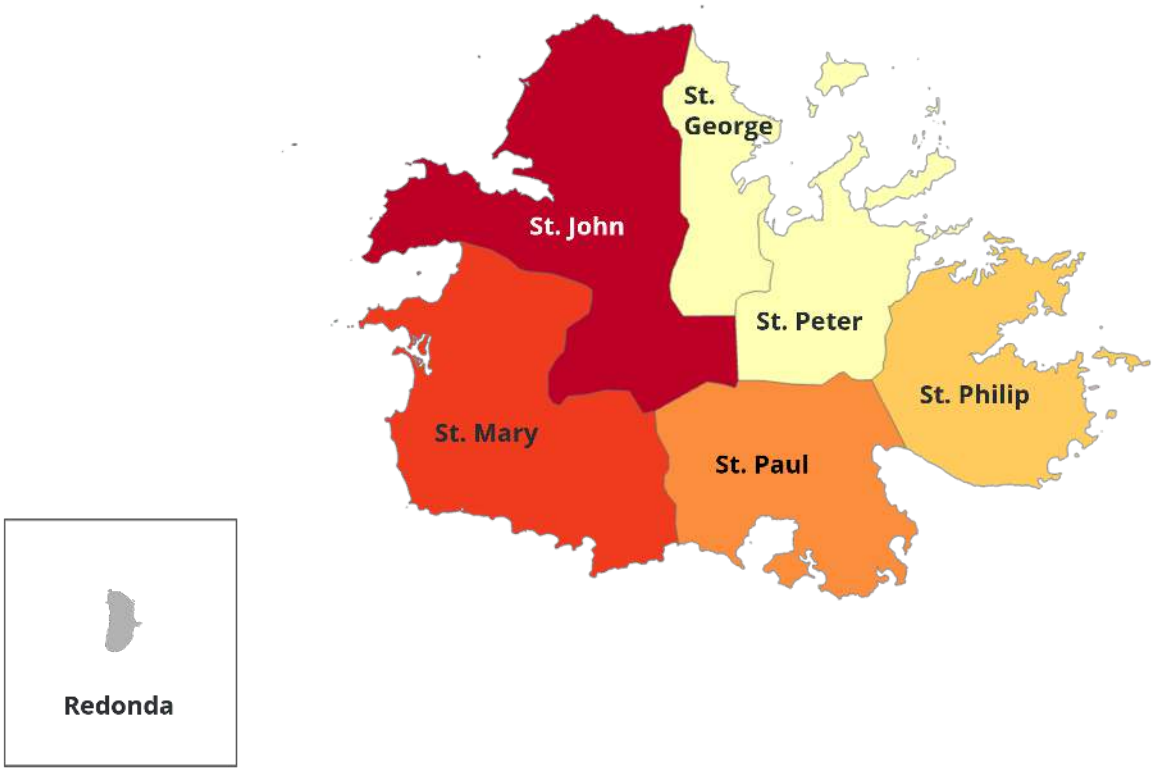


Multi-Hazard Exposure **Vulnerability** **Island Capacity** **Logistics Capacity**

MULTI-HAZARD RISK BY PARISH

	RANK	PARISH	INDEX SCORE
VERY HIGH	1	Saint John	0.508
HIGH	2	Saint Mary	0.470
MODERATE	3	Barbuda	0.463
	3	Saint Paul	0.463
LOW	5	Saint Philip	0.355
VERY LOW	6	Saint Peter	0.343
	7	Saint George	0.274
NO DATA	-	Redonda	-


Multi-Hazard Risk Index
Very Low
Low
Moderate
High
Very High
No Data
Barbuda


St. George
St. John
St. Peter
St. Philip
St. Mary
St. Paul
Redonda

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 Antigua and Barbuda 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.

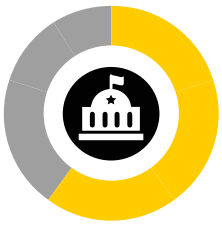
Considering diverse operational successes and barriers, the DMA examined six core disaster management themes: Enabling Environment; Institutional Arrangements; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communication and Information Management.

DISASTER MANAGEMENT ANALYSIS RESULTS

CURRENT STATUS

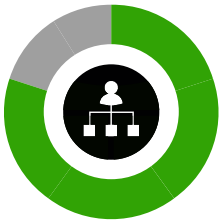
Limited or No Capacity — Advanced Capacity

DISASTER MANAGEMENT ANALYSIS THEME AND SUBTHEMES



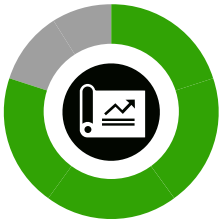
A. Enabling Environment

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



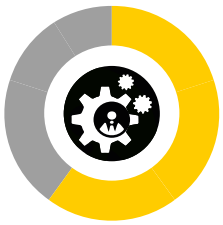
B. Institutional Arrangements

Organizational Structures
Leadership Arrangements
Mechanisms for Stakeholder Engagement



C. Disaster Governance Mechanisms

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

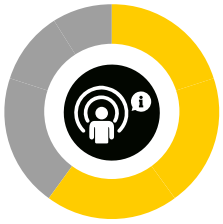


D. Capabilities and Resources

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

E. Capacity Development

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



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

Antigua and Barbuda has progressively advanced its disaster management capabilities on several fronts, especially the organizational and institutional arrangements, stakeholder collaboration, and disaster governance frameworks within the mitigation, preparedness, response, and recovery phases of disasters.

Notable achievements for Antigua and Barbuda include robust stakeholder engagement enabled through initiatives such as the Tsunami Ready Programme that strengthens the country's ability to respond to tsunamis effectively but also contributes to the overall resilience of the coastal communities. This Programme not only improves awareness, knowledge, and response capabilities, but also empowers residents to take decisive action during tsunami events, ultimately saving lives and minimizing the impact of disasters on the community.

Another major accomplishment in Antigua and Barbuda is the Declaration of Safe School Initiative that outlines a framework to fortify school safety protocols. The emphasis on a shared responsibility approach and active private and public sector involvement reflects the country's commitment to fostering a comprehensive disaster management strategy that is both responsive and adaptable. It also aligns strategically with international and regional disaster risk reduction commitments. These initiatives collectively reflect the dedication to fostering resilience within Antigua and Barbuda.

Areas where strengthened capacities are most crucial include legal and financial support and information collection, management, and distribution.

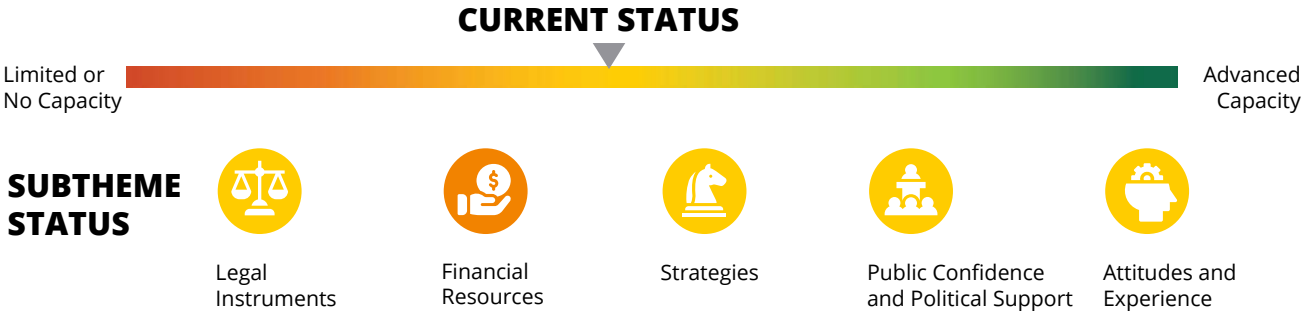
This study is designed to establish the Antigua and Barbuda baseline disaster management preparedness levels presented in six interconnected themes. It is a step towards meaningfully tracking progress while setting clear and coherent objectives aligned with the nation's commitment to the Sendai Framework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

THE DMA

ENABLING ENVIRONMENT

ENABLING ENVIRONMENT

Findings indicate Antigua and Barbuda's current Enabling Environment shows achievement with significant limitations.



Antigua and Barbuda has achieved progress, albeit with significant limitation, 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

Antigua and Barbuda is facing significant challenges related to legal and financial support, which are hindering its ability to fulfill its mission requirements. Antigua and Barbuda would benefit by incorporating robust and inclusive recovery considerations into its national and sector-specific policy framework through revision of the National Comprehensive Disaster Management (CDM) Policy and Strategy. Draft CDM Legislation has yet to be adopted into law and integrated into the National Development Strategy.

The implementation of a comprehensive CDM Bill would empower NODS by providing a legal framework and enhanced authority to proactively undertake essential actions for effective medium- and long-term DM initiatives, ensuring a more robust and timely response to potential crises.

RECOMMENDATIONS

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

- Review and update the draft CDM policy to strengthen the legal instruments necessary for effective DM.
- Prioritize the movement of the draft CDM policy through the necessary legislative process and ensure integration into the National Development Strategy.
- Ensure financial stability and support of NODS over the long-term to allow for the necessary investments to protect the nation. Priority should be given to the following areas:
  - NODS administrative and operational expenditures required to meet the mission
  - Establishment of a modified organizational framework that incorporates new legal frameworks and authorities
  - Improved human resources and staffing procedures/capacity to attract, hire and retain necessary technical staff
  - Community readiness and outreach 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, F, G

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

SDGs
3, 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 (2.2, 2.4), 3, 4

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

ENABLING ENVIRONMENT

LEGAL INSTRUMENTS

FINDINGS

The policy landscape in Antigua and Barbuda reflects a nuanced approach to policy coherence. While the Medium-Term Development Strategy (MTDS) aligns with the Sustainable Development Goals (SDGs) and acknowledges the importance of disaster risk management and climate resilience, explicit integration and linkage with global and regional instruments remains limited.

The Intended Nationally Determined Contribution (INDC) demonstrates a commitment to policy coherence and recognizes the multifaceted impact on health, the economy, and vulnerable groups, although it lacks a comprehensive exploration of their interrelation and connection between climate change and disaster risk.

Antigua and Barbuda would benefit from strengthened policy coherence across strategic, conceptual, institutional, operational, and financial dimensions to enhance the country's pursuit of integrated sustainable development, climate resilience, and disaster risk reduction (DRR).

RECOMMENDATIONS

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

- Integrate global and regional policies into national frameworks, especially in the MTDS.
- Resolve institutional challenges by establishing clear coordination mechanisms at local levels and creating a unified framework across different policies.
- Integrate DRR and climate change considerations into sector plans to support cohesive and impactful strategies.
- Improve financial consistency by introducing joint funding mechanisms and leveraging development funds that align with sustainable development, climate resilience, and DRR goals.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

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

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

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

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4), 2 (2.2, 2.3, 2.4), 3, 4 (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

The National Office of Disaster Services (NODS) operates within a constrained budget. These ongoing and persistent budget constraints have notable impact on the ability of NODS to effectively conduct Disaster Risk Reduction and Management (DRRM) and subsequently invest in resilience-building measures.

In directing adequate funding to support NODS, 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 NODS, will contribute to the overarching national goals of sustainable development, reduction of poverty, and economic expansion while enhancing the well-being of Antigua and Barbuda.

RECOMMENDATIONS

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

- Create clear project proposals that show how projects and funding align with national goals and international agendas on DRR, SDGs, and CCA.
  - Work with the Ministry of Finance to allocate resources within governance budgets.
- Ensure funding is prioritized and allocated strategically to meet NODS's specific needs, including equipment, infrastructure, training, and capacity building.
- Diversify funding sources to reduce reliance on one donor and explore long-term opportunities such as grants, partnerships with NGOs, private sector support, and climate finance mechanisms.
- Invest in capacity building for NODS staff through 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), (l), (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

ENABLING ENVIRONMENT

FINANCIAL RESOURCES

FINDINGS

The National Office of Disaster Services (NODS) operates within a constrained budget under the central government, lacking a specific fund for pre-disaster risk reduction or post-disaster recovery. Instead, funds for response and recovery are sourced from the Contingency Fund under the Finance Administrative Act of 2006, with limitations on disbursement set at both initial and overall levels.

Antigua and Barbuda has been a member of the Caribbean Catastrophic Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC) since 2009, and as such has transfer risk mechanisms in place. However, these mechanisms are not extended to the household and individual levels. Regulatory and policy instruments face challenges in enforcement, creating gaps in integration of disaster risk reduction (DRR) into development activities. While Antigua and Barbuda demonstrate commendable investment in DRR initiatives, notable challenges persist in the financial allocation, risk transfer mechanisms, and the enforcement of regulatory instruments to enhance resilience and ensure the effective integration of DRR and development activities.

RECOMMENDATIONS

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

- Establish formal guidelines for funding distribution with clear administrative procedures, eligibility criteria, and defined categories of assistance.
- Request CCRIF SPC to expand insurance coverage to include Excessive Rainfall policies.
- Develop a national Climate and Disaster Risk Financing Strategy for rapid financing in case of disaster that includes:
  - National Flood Insurance Program
  - Catastrophe Insurance Program
  - Public Assets Financial Protection Program
- Offer micro-loans for financial needs when conventional loans are not available.
- Consider National Incentive Policies for regional and national partners, tailored to local needs.

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

Priorities for Action
1, 2, 3, 4

Global Targets
B, C, D, F

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

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

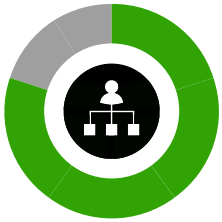
Paris Agreement
7.1, 8.1

CDEMA CDM Priority Areas
1 (1.2, 1.3), 2 (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

THE DMA

INSTITUTIONAL ARRANGEMENTS



INSTITUTIONAL ARRANGEMENTS

Findings indicate Antigua and Barbuda's 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 is formed are indicators of Antigua and Barbuda's 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.

INSTITUTIONAL ARRANGEMENTS

MECHANISMS FOR STAKEHOLDER ENGAGEMENT

FINDINGS

Volunteers are a critical component to the success of disaster management initiatives within Antigua and Barbuda. The Office of National Disaster Services (NODS) has relied on volunteers to support preparedness and response operations with great success.

NODS efforts to cultivate and facilitate an active volunteer network to augment their operations have been challenging at the community level due to response capacity and turnover within the local District Disaster Committees.

The need has been identified to integrate volunteers and volunteer organizations more formally into the disaster management structure through standardized process to support continuity of operations and ensure quality service delivery.

RECOMMENDATIONS

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

- Create formal roles for volunteers and volunteer organizations to effectively participate in preparedness and response efforts in line with NODS's mission.
- Establish a volunteer policy with clear mechanisms for integrating individuals and organizations into the national response system.
  - Focus on recruiting, training, and tracking of volunteers in the District Disaster Committees for reliable assistance.
  - Provide volunteers with training and certifications for technical tasks that support government disaster management efforts.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 3, 4

Global Targets
A, B, C, D

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

SDGs
3, 4, 11, 16

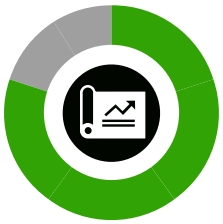
CDEMA CDM Priority Areas
1, 2 (2.3, 2.4), 3 (3.1), 4 (4.2, 4.4)

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 Antigua and Barbuda's 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 Antigua and Barbuda: Plans and Standard Operating Procedures (SOPs); Command, Control, and Coordination Systems; and Emergency Operations Centers.

DISASTER GOVERNANCE MECHANISMS

PLANS AND PROCESSES

FINDINGS

It would benefit all stakeholders in Antigua and Barbuda for NODS 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 results in enhanced standards and systematic oversight of vital personnel and infrastructure.

RECOMMENDATIONS

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

- Develop and disseminate a standardized template for BCP tailored to the private sector, facilitating consistency and effective planning across businesses in Antigua and Barbuda.
- Continue to strengthen relationships through regular meetings, joint working groups, and dedicated contacts for improved communication and information sharing.
- Implement systems for sharing critical information and data, such as real-time weather forecasts and disaster impact assessments for decision-making.
- Integrate formal memoranda of understanding (MOU) into plans and protocols to define roles, responsibilities, and expectations of government and private sector entities, including liabilities and resource allocation.
- Conduct joint COG/BCP training and exercises for coordinated response and recovery efforts.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
2, 4

Global Targets
A, B C, 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 (4.1, 4.4)

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

DISASTER GOVERNANCE MECHANISMS

THE DMA

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

Findings indicate Antigua and Barbuda's current Capabilities and Resources show achievement with significant limitations.

SUBTHEME STATUS

- Facilities and Equipment
- Human Resources
- Inventory of Commodities and Supplies
- Functional Capabilities

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 the overall capabilities and resources of Antigua and Barbuda. 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. The following core thematic areas were reviewed for this analysis: Dedicated Facilities and Equipment; Human Resources; Inventory of Commodities and Supplies; and Targeted Functional Capabilities.

CAPABILITIES AND RESOURCES

TARGETED FUNCTIONAL CAPABILITIES

FINDINGS

Antigua and Barbuda would benefit from a strengthened agriculture sector against climate change and extreme weather events. Central to this approach is the development of a comprehensive disaster management plan dedicated to the agricultural sector, emphasizing sustainable practices that can withstand and recover from major adverse events. Simultaneously, the establishment of a new Medium-Term Development Strategy (MTDS) is paramount, integrating resilience measures across sectors with a specific focus on embedding climate-resilient initiatives within agriculture. This collective effort aims to enhance the economic resilience of the nation.

Additionally, there is a call for timely completion of the National Adaptation Plan, tailoring adaptive strategies to the unique challenges faced by the agriculture sector and complementing the national disaster management plan and MTDS.

These concerted planning efforts aim to fortify Antigua and Barbuda's agricultural development against climate-related challenges, fostering sustainable practices, resilient infrastructure, and adaptive strategies to ensure continuity and productivity in the face of adverse events.

RECOMMENDATIONS

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

- Expedite the development of a comprehensive disaster management plan for the agriculture sector.
- Prioritize a new MTDS that incorporates climate resilience into the agricultural domain.
- Expedite completion of the National Adaptation Plan, focusing on adaptive strategies for the agricultural sector.
- Implement targeted initiatives to boost agricultural resilience by:
  - Offering training programs and knowledge transfer activities for farmers and stakeholders to support sustainable practices and crop continuity.
  - Developing climate-resilient infrastructure, including robust water supply systems.
  - Helping farm and agriculture facility owners climate proof their assets.

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
2, 8, 9, 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 (4.1, 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

TRAINING AND EDUCATION

FINDINGS

The Government of Antigua and Barbuda and National Office of Disaster Preparedness (NODS) would benefit from an official centralized disaster training and exercise (T&E) initiative led and coordinated by NODS.

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

RECOMMENDATIONS

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

- Assign NODS staff to manage the T&E program, focusing on logistics, coordination, and alignment with multi-agency schedules.
  - Expand simulation and scenario-based exercises among response agencies to enhance collaboration and community capacity building.
- Create a master training schedule and oversee communication channels and social media platforms to increase visibility, facilitate information sharing, and optimize collaboration.
- Implement a digital record management system for all participating agencies to track T&E schedules, participants, evaluations, and lessons-learned, allowing for both reviews and real-time updates.
- Implement a standardized T&E reporting framework for consistent data collection, including key metrics, observations, and feedback for formal evaluations and after-action reports.

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

THE DMA

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT

Findings indicate Antigua and Barbuda's current Capacity Development efforts are at achievement with significant limitations.

SUBTHEME STATUS

CD Plans and Strategies

Training and Education Programs and Facilities

CD Monitoring and Evaluation

Antigua and Barbuda's ability to advance disaster management strategies that achieve risk reduction and resilience goals is 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

CD PLANS AND STRATEGIES

FINDINGS

Antigua and Barbuda would gain substantial benefits from ensuring comprehensive national to district-level plans that strategically incorporate measures to address the needs of vulnerable populations (VPs). These plans should address the specific needs of women and children, the poor, persons with disabilities, and the elderly.

At the government level, such a plan ensures the formulation and implementation of inclusive policies, allocating resources to safeguard and uplift vulnerable communities, addressing specific gender gaps and promoting gender equality. On a local level, the plan facilitates tailored initiatives that address the specific challenges faced by vulnerable groups as well as gender-differentiated effects of disasters.

A government-down-to-local-community plan that prioritizes VPs and gender inclusion contributes to a more cohesive, sustainable, and resilient society and lays the foundation for long-term social and economic development, fostering a more inclusive and equitable nation.

RECOMMENDATIONS

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

- Formulate and implement national policies that explicitly incorporate VPs and gender-specific considerations, identify and address population needs across various sectors.
- Allocate funds to support vulnerable communities and address gender gaps at the national and local levels. Ensure budget allocations are designated for programs targeting challenges faced by these groups.
- Encourage and support community-based initiatives aimed at VPs by fostering partnerships between NGOs and community leaders to create tailored programs.
- Include vulnerability and gender-based assessments in national and local planning efforts.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, E

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

SDGs
1, 5, 10, 11, 16

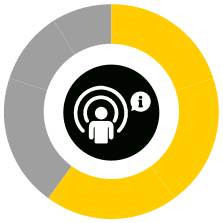
CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.3, 1.4),
2 (2.3, 2.4), 4 (4.2, 4.4)

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 Antigua and Barbuda's Communication and Information Management capacity shows achievement with significant limitation.

SUBTHEME STATUS

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 Antigua and Barbuda 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

Media and Public Affairs

FINDINGS

The process for dissemination of public information on disaster management within Antigua and Barbuda is not well defined. As a result, the public lacks a central location for critical and lifesaving information.

The National Office of Disaster Services (NODS) would benefit from a focused and expanded public information campaign to amplify the impact of its outreach more effectively.

The NODS website Message Board, Press Releases, Notices, and Facebook page are not consistently maintained.

However, the NODS Instagram page remains active, offering a valuable platform for public information. The effort to maintain Instagram could be expanded to better serve the public.

RECOMMENDATIONS

The following actions are recommended to improve media and public affairs efforts towards advanced capacity:

- Create a comprehensive public outreach campaign to centralize information and guide the public before, during and after an event.
- Consider a scalable outreach approach:
  - Maintain traditional messaging through radio and TV
  - Launch a social media campaign to share consistent messages across various platforms, ensuring a strong public connection.

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
4, 11, 13, 16

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 (3.2), 4 (4.2)

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

Antigua and Barbuda has robust data holdings; however, they are not easily accessible to support the Disaster Management Mission of the National Office of Disaster Services (NODS).

The data in current form are not uniform, centralized or easily applied without extensive statistical or GIS knowledge and skills.

The completed NDPBA provides Antigua and Barbuda with a baseline and starting point. The Risk and Vulnerability Assessment (RVA) can support planning for critical infrastructure identification and exposure analysis and can support NODS and Disaster Management (DM) stakeholders with the necessary scientific information to prioritize the strengthening of existing physical infrastructures. The data can also be used to plan, justify, and budget for local mitigation projects.

The RVA 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 Antigua and Barbuda in meeting its mission requirements:

- Consider using the NDPBA data with GIS-mapping tools to improve community-based disaster management and planning.
- Apply RVA resources such as hazard maps for population exposures, critical infrastructure, and shelter/evacuation locations, to guide sector-based planning, facility improvements and support for vulnerable groups.
- Create local hazard and risk maps to aid data-driven and scenario-based training, exercise planning, and preparedness activities.
- Employ GIS-based mapping systems to support risk assessments, management, and decision-making for DM and DRR planning, including determining necessary requirements for risk and vulnerability assessments.

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

COMMUNICATION AND INFORMATION MANAGEMENT

INFORMATION COLLECTION, MANAGEMENT, AND DISTRIBUTION

FINDINGS

The National Office of Disaster Services (NODS) maintains hazard maps utilized by ministries across sectors. There exists a fragmented institutional framework within satellite units responsible for data collection in various ministries. To fortify and address lingering digital infrastructure gaps, Antigua and Barbuda would benefit from establishing a robust and collaborative data management framework and added integration of GIS capabilities.

NODS could derive advantages from collaborating with agencies that proficiently utilize GIS data and mapping capabilities, thereby applying them across sectors and supporting NODS 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 NODS in meeting its mission requirements:

- Align national data collection and storage standards with Antigua and Barbuda's overarching digital agenda.
- Facilitate data sharing among government entities, NGOs, non-governmental DM stakeholders, and the public.
- Establish a centralized, GIS-based data management system to provide a common operating picture.
    - Use it to identify priority needs, assess risks and losses, and gather disaster data for capacity development.
- Invest in training and capacity-building programs for government agencies involved in data collection, focusing on statistical methods and information technology to enhance personnel skills and overall capabilities.

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

MONITORING AND NOTIFICATION

FINDINGS

Antigua and Barbuda have made significant strides in early warning system (EWS) capabilities. The Antigua and Barbuda Meteorological Services provides forecasting and monitoring for hydrometeorological events. In addition, a Common Alerting Protocol has been implemented throughout the country as a platform for timely information dissemination. Nonetheless, a significant obstacle facing the effectiveness of EWS is the existence of "dead zones" within agencies where communications are restricted, leading to failures in relaying crucial risk information. In addition, Antigua and Barbuda would benefit by fortifying EWS capabilities to encompass a broader range of hazards beyond hydrometeorological events.

Despite advancements made thus far, there remains a necessity to enhance and expand EWS infrastructure, coupled with pre-disaster training programs. This would contribute to a more resilient, informed, and cohesive disaster management and response framework, positioning Antigua and Barbuda to navigate future challenges with greater efficacy and community support.

RECOMMENDATIONS

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

- Prioritize acquiring advanced technologies for all-hazards monitoring and communications systems to enhance early warning capabilities.
- Strengthen internal communication with training, redundant systems, and advanced technologies to address challenges within "dead zones".
- Tailor EWS to specific community needs to promptly reach exposed and vulnerable populations.
- Prioritize community engagement, public awareness, and coordinated response through pre-disaster training programs.
- Perform regular evaluations of notification systems and EWS to pinpoint areas for improvement and maintain ongoing effectiveness.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 3, 4

Global Targets
A, B, C, D, G

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

SDGs
9, 10, 11

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

BEST PRACTICES COMMENDATION

DISASTER GOVERNANCE MECHANISMS

Highlighting Antigua and Barbuda's Declaration of School Safety

In 2017, the Antigua and Barbuda signed the Declaration of School Safety and secured the endorsement of the twelve Ministries of Education. Serving as a pivotal document, this declaration forms the cornerstone for the systematic implementation of strategies aimed at disaster risk reduction and the enhancement of climate change resilience within the broader context of the Caribbean Safe School Initiative.

A central focus of the declaration lies in augmenting coordination and cooperation mechanisms among stakeholders, extending from the community, regional, national, and international levels. Emphasis is also placed on cultivating collaboration among Caribbean Ministries of Education, relevant private sector, non-governmental organizations, and various regional and international entities.

A critical aspect of the declaration entails the formulation and execution of a comprehensive framework designed to monitor and assess progress in the execution of initiatives outlined in the Road Map on School Safety. This framework is authorized under the Minister of Education, symbolizing a concerted commitment to fortify school safety protocols and enhance regional resilience against potential adversities. Such proactive measures highlight the dedication to creating a secure and resilient educational environment throughout the region.

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

SDGs
4, 11, 13, 16, 17

Paris Agreement
7.1, 8.1

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

COMMENDATIONS FOR BEST PRACTICES

COMMUNICATION AND INFORMATION MANAGEMENT

Enhancing Tsunami Preparedness and Community Resilience in Antigua and Barbuda: Tsunami Ready Programme

In 2020, St. John's, Antigua and Barbuda, 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 St. John's Tsunami Ready achievement was acknowledged by international partners who validated and encouraged their ongoing commitment to preparedness. These efforts not only strengthened St. John'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.

It is recommended that Antigua and Barbuda continue to expand the Tsunami Ready Programme to all susceptible Parishes located within the Tsunami hazard zones.

SENDAI FRAMEWORK, SDGS, AND CDEMA CDM PRIORITY AREAS ADVANCED

Priorities for Action
1, 2, 4

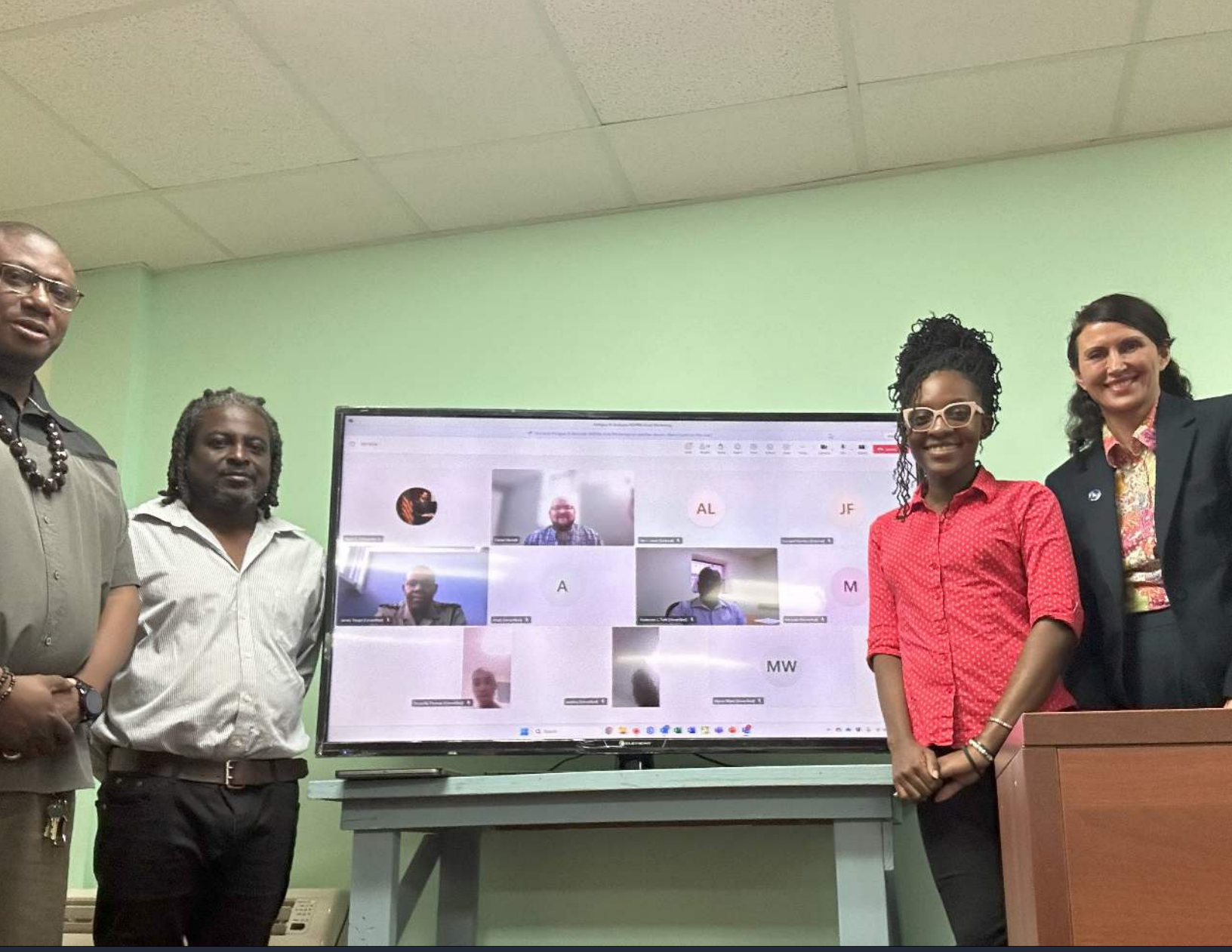
Global Targets
A, B, D, F, G

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

SDGs
3, 11, 16, 17

CDEMA CDM Priority Areas
1 (1.4), 3 (3.1, 3.3), 4 (4.2, 4.3, 4.4)

COMMENDATIONS FOR BEST PRACTICES



THE NDPBA

NATIONAL RECOMMENDATIONS

THE NDPBA
NATIONAL RECOMMENDATIONS

1 REVIEW AND UPDATE THE DRAFT COMPREHENSIVE DISASTER MANAGEMENT (CDM) POLICY TO STRENGTHEN THE LEGAL INSTRUMENTS NECESSARY FOR EFFECTIVE DISASTER MANAGEMENT.

The CDM policy should:

- Provide long-term funding for the National Office of Disaster Services (NODS) to ensure financial stability and enable the necessary investments to protect the nation. Priorities should include:
  - Funding for recovery functions that connect recovery and development plans, climate change adaptation, livelihoods, government compensation for private sector and recovery operations, and support for vulnerable groups such as women and children.
  - Prioritize the movement of the draft CDM policy through the legislative process as part of comprehensive synchronized to support CDM Legislation and Regulations.

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

Priorities for Action
1, 2, 3, 4

SDGs
3, 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)

CDEMA CDM Priority Areas
1 (1.1, 1.2, 1.4), 2, 3 (3.1, 3.2), 4 (4.1, 4.2, 4.3, 4.4)

2 INCREASE THE ANNUAL BUDGET FOR THE NATIONAL OFFICE OF DISASTER SERVICES' (NODS) TO SUPPORT THE GROWING NEED FOR TECHNICAL STAFF AND EXPANDED PROGRAMS REQUIRED TO ADDRESS THE PREDICTED RISE IN CLIMATE-RELATED HAZARDS IN ANTIGUA AND BARBUDA.

- Provide annual funding for NODS to cover operating costs and meet program requirements.
- Secure funding to support human resources, programs, equipment, infrastructure, capacity building, and response operations.
- Establish/promote internship program in collaboration with Ministry of Education among relevant disaster management related sector organization to encourage/enhance future human resource technical development
- Create detailed project proposals showing how NODS projects align with climate change adaptation, with an emphasis on future climate impacts of coastal hazards and maritime infrastructure.
- Propose streamlined financial project tracking and reporting to reflect and account for how much national resources are invested into DRM related activities across public sectors.

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

3 STRENGTHEN COMMUNICATION AND COLLABORATION AMONG ALL GOVERNMENT MINISTRIES AND DEPARTMENTS INVOLVED IN DISASTER MANAGEMENT.

- Maintain strong communication with the Prime Minister's Office and other high-level decision-making bodies for swift coordination, resource allocation, and integrated planning.
- Ensure the Ministry Disaster Management Liaison Officer network is fully supported by the Permanent Secretary (PS) Forum Committee, i.e., each Ministry PS ensures that there are two alternates identified to work with the principal officer (3-tier deep system), reporting regularly to the Permanent Secretary and the NODS.
- Establish information-sharing mechanisms to promote collaboration, efficient resource use, and prevent duplication of effort.
- Prioritize alignment of government efforts and enhance inter-agency coordination.
- Track all Disaster Risk Reduction (DRR), Sustainable Development Goals (SDGs), and Climate Change Adaptation (CCA) initiatives to streamline efforts and avoid duplication.

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

Priorities for Action
1, 2, 4

SDGs
8, 9, 10, 11, 13, 14, 15, 16

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)

4 DEVELOP A NATIONAL CLIMATE AND DISASTER RISK FINANCING STRATEGY TO PROMOTE LONG-TERM ECONOMIC AND FINANCIAL STABILITY WHILE ADAPTING TO CLIMATE CHANGE.

- Implement comprehensive insurance programs that cover primary hazards, including.
  - National Flood Insurance Program
  - Catastrophe Insurance Program
  - Public Assets Financial Protection Program
- Provide rapid financing in case of disaster.
- Re-vitalize the National Disaster Management Fund to ensure sustaining activities and supplies for critical use.
  - Explore financing through modalities firm Ministry of Finance to allow the NODS to set a minimal nominal fee to conduct supporting activities to requesting parties and private sector entities, that is channeled into separate stand-alone account, accessed through established declaration of national emergency situations, with auditing by the Ministry of Finance and the regional CDEMA system.
- Urge the Caribbean Catastrophic Risk Insurance Facility Segregated Portfolio Company (CCRIF SPC) to expand insurance coverage by including Excessive Rainfall policies.

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

Priorities for Action 1, 2, 3, 4	**SDGs** 9, 10, 11, 13, 16, 17
Global Target (s) A, C, D, F	**Paris Agreement Articles** 7.1, 8.1
Guiding Principle(s) (a), (b), (c), (d), (e), (f), (g), (j), (h), (i), (j), (k), (l)	**CDEMA CDM Priority Areas** 1 (1.2, 1.3,), 2 (2.2, 2.3), 3 (3.1, 3.2), 4 (4.2, 4.4)

5 CONDUCT A COMPREHENSIVE PLANNING AUDIT TO IDENTIFY GAPS IN AND AMONG EXISTING PLANS AND UPDATE OUTDATED PLANS.

- Harmonize Continuity of Government (COG) and Business Continuity Planning (BCP) efforts to maintain critical services and support disaster management and sustainable governance for greater national resilience.
  - Establish mechanisms for sharing critical information, data, and resources including real-time data such as weather forecasts and disaster impact assessments, to aid decision-making during crises.
  - Establish a uniform suite of parameter for all data collecting agencies and support the enhancement of the data base unit of the national repository in the Statistical Division.
  - Develop joint COG/BCP training and exercises to for coordinated response and recovery procedures.
- Secure targeted Memorandums of Understanding (MOUs) in critical areas such as medical provisions and services, transportation, and information governance and communication coordination.

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

Priorities for Action	SDGs
1, 2, 4	11, 16
Global Target (s)	**CDEMA CDM Priority Areas**
A, C, D	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 need additional time or assistance for evacuation.
- Engage communities in planning to identify challenges and proactive solutions before a disaster.
- Include public transportation companies in disaster management planning.
- Establish a dedicated small fleet of disaster management vehicles specifically for collaboration data collection, damage assessment and supported field work, managed by the NODS Office.
- Establish formal arrangements to help 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 GEOSPATIAL DATA AND LOGISTICS TO INFORM COMMUNITY-BASED DISASTER MANAGEMENT AND PLANNING.

- Leverage resources such as hazard mapping for population exposures, critical infrastructure, and evacuation/shelter sites to guide sector-specific community planning, improve infrastructure, and profile vulnerable groups.
- Create local hazard and risk maps to support and advance data-driven and scenario-based training, exercises, and preparedness efforts.
- Employ GIS-based mapping systems for risk assessments, management, and decision-making processes to establish requirements for risk and vulnerability assessments in Disaster Management and Disaster Risk Reduction planning.
- Fast track the establishment of the NODS Information and data management task Unit.

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 ESTABLISH A CENTRALIZED DIGITAL REPOSITORY WITHIN THE NATIONAL OFFICE OF DISASTER SERVICES (NODS) FOR DISASTER MANAGEMENT SUPPLIES AND RESOURCES TO SUPPORT STRATEGIC DESIGNATION AND STREAMLINE STORAGE FACILITY MANAGEMENT ACROSS THE COUNTRY.

- Standardize reporting of DM supply inventories across all facilities and administrative levels.
- Maintain commodity stockpiles at levels that meet estimated requirements, particularly in underserved, and densely populated areas.
- Enhance physical resources for NODS warehouse management team to support the sub-regional function of the office within the CDEMA Sub-Regional Focal Group.

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

Priorities for Action	SDGs
1, 2, 4	3, 11, 16
Global Target (s)	**CDEMA CDM Priority Areas**
A, C, D	1, 3 (3.1, 3.2), 4 (4.1, 4.2)
Guiding Principle(s)	
(a), (b), (e), (f), (g), (h), (i)	

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

- Promote data sharing among government entities, non-governmental disaster management stakeholders, academia, and with the public to provide all stakeholders with the most current information.
- Implement a centralized, GIS-based data management system to create a common operating picture that helps to identify high-risk areas, priority needs, resource tracking, and damage/loss data to promote response and recovery capacity building.

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)

10 DEVELOP AND DISTRIBUTE DISASTER MANAGEMENT (DM) AND DISASTER RISK REDUCTION (DRR) PLANS AND STRATEGIES TO DRIVE INITIATIVES TOWARDS ADVANCED CAPACITY.

- Foster connections with key stakeholders like the Red Cross and volunteer organizations.
- Strengthen oversight of coordination and support of capacity-building efforts for DM and DRR.
  - Assist key sectors with incorporating DRR into plan development, implementation, and maintenance.
  - Include vulnerable and underserved groups in DM plans, focusing on response and recovery, evacuation, and shelter needs.
- Perform regular evaluations to assess current capacity and enhance resource needs across sectors for DM and DRR.
- Prioritize sector integration, explicitly incorporating DRR and climate change considerations to create a cohesive and impactful strategy.

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)

11 CREATE A VOLUNTEER POLICY THAT ESTABLISHES MECHANISMS AND PROVISIONS FOR THE SUCCESSFUL INTEGRATION OF INDIVIDUALS AND ORGANIZATIONS INTO THE NATIONAL RESPONSE SYSTEM.

- Define formal roles for volunteers and volunteer organizations to engage effectively in preparedness and response efforts aligned with the mission of the National Office of Disaster Services (NODS).
  - o Implement appropriate recruiting, training, and tracking of volunteers within District Disaster Committees to ensure reliability and availability.

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

Priorities for Action
2, 3, 4

SDGs
4, 11, 16

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

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

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

12 FORMALIZE DISASTER TRAINING AND EXERCISE (T&E) INITIATIVES INTO A CENTRALIZED PROGRAM, LED AND COORDINATED BY THE NATIONAL OFFICE OF DISASTER SERVICES (NODS).

- Appoint dedicated staff within the NODS to lead a formal T&E program focused on exercise logistics, coordination, and multi-agency scheduling.
- Develop a master training schedule and manage communication channels, including social media, to enhance visibility, share information, and improve collaboration.
- Implement a digital record management system accessible to all participating agencies to organize T&E schedules, participant tracking, evaluations, and lessons-learned for both review and real-time updates.
- Establish a standardized T&E reporting framework for consistent data collection, including key metrics, observation, and feedback mechanisms for performance evaluations and after-action reports.
- Expand simulation and scenario-based exercises, particularly for response agencies, to boost collaboration and capacity-building across communities.

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)

13 STRENGTHEN ANTIGUA AND BARBUDA'S AGRICULTURAL SECTOR TO WITHSTAND CLIMATE-RELATED CHALLENGES BY PROMOTING SUSTAINABLE PRACTICES, RESILIENT INFRASTRUCTURE, AND ADAPTIVE STRATEGIES TO MAINTAIN CONTINUITY AND PRODUCTIVITY DURING ADVERSE EVENTS.

- Expedite the creation of a comprehensive disaster management plan specifically for the agriculture sector.
- Develop targeted initiatives to boost the resilience of agriculture, focusing on building capacity to withstand climate-related challenges.
- Increase support and de-centralization of hydro- and aquaponics initiatives.

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

Priorities for Action	SDGs
1, 2, 3, 4	1, 2, 9, 11, 13, 14, 15, 16, 17
Global Target (s)	**Paris Agreement Articles**
C, D, E, F	7.1, 8.1
Guiding Principle(s)	**CDEMA CDM Priority Areas**
(a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (m)	1 (1.2, 1.3, 1.4), 2 (2.1, 2.3, 2.4), 3, 4 (4.2)

14 EXPAND AWARENESS AND PREPAREDNESS CAMPAIGNS FOR RESIDENTS, VISITORS, AND BUSINESSES ABOUT NATURAL AND HUMAN-CAUSED HAZARDS IN ANTIGUA AND BARBUDA.

- Enhance public awareness of hazards, alert and warning messages, and safety measures to protect lives and property through a coordinated engagement strategy involving disaster managers, schools, media, non-governmental organizations, and other partners.
- Develop evacuation plans and conduct exercises for high density housing developments and communities near industrial or hazardous material sites to mitigate exposure to dangerous substances.
- Promote the knowledge and use of alert and warning system tools through targeted outreach campaigns that involve multiple stakeholders.

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)

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

- Integrate climate change adaptation and sea level rise forecasting into future planning and preparedness initiatives.

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

Priorities for Action	SDGs
1, 2, 4	3, 11, 13
Global Target (s)	**CDEMA CDM Priority Areas**
A, B, G	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)	

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

- Invest in advanced communication technologies to overcome challenges in areas with limited connectivity.
- Tailor EWS to the specific needs of different communities, ensuring they effectively reach exposed and vulnerable communities promptly.
- Regularly evaluate notification and EWS to identify areas for improvement and maintain 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)

17

PURSUE OPPORTUNITIES TO SHARE SUCCESSES AND LESSONS LEARNED FROM ANTIGUA AND BARBUDA'S CAPACITY-BUILDING EFFORTS, INCLUDING THE TSUNAMI READY PROGRAMME AND SAFE SCHOOL INITIATIVE, TO SUPPORT CLIMATE RESILIENCE AND RISK REDUCTION STRATEGIES NATIONALLY AND INTERNATIONALLY.

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

ANTIGUA AND BARBUDA NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

RECOMMENDATION 1

Review and update the draft Comprehensive Disaster Management (CDM) policy to strengthen the legal instruments necessary for effective disaster management.

RECOMMENDATION 2

Increase the annual budget for the National Office of Disaster Services' (NODS) to support the growing need for technical staff and expanded programs required to address the predicted rise in climate-related hazards in Antigua and Barbuda.

RECOMMENDATION 3

Strengthen communication and collaboration among all government ministries and departments involved in disaster management.

RECOMMENDATION 4

Develop a national climate and disaster risk financing strategy to promote long-term economic and financial stability while adapting to climate change.

RECOMMENDATION 5

Conduct a comprehensive planning audit to identify gaps in and among existing plans and update outdated plans.

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 geospatial data and logistics to inform community-based disaster management and planning.

RECOMMENDATION 8

Establish a centralized digital repository within the National Office of Disaster Services (NODS) for disaster management supplies and resources to support strategic designation and streamline storage facility management across the country.

5-YEAR PLAN

ANTIGUA AND BARBUDA NATIONAL RECOMMENDATIONS

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5

RECOMMENDATION 9

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

RECOMMENDATION 10

Develop and distribute disaster management (DM) and disaster risk reduction (DRR) plans and strategies to drive initiatives towards advanced capacity.

RECOMMENDATION 11

Create a volunteer policy that establishes mechanisms and provisions for the successful integration of individuals and organizations into the national response system.

RECOMMENDATION 12

Formalize disaster training and exercise (T&E) initiatives into a centralized program, led and coordinated by the National Office of Disaster Services (NODS).

RECOMMENDATION 13

Strengthen Antigua and Barbuda's agricultural sector to withstand climate-related challenges by promoting sustainable practices, resilient infrastructure, and adaptive strategies to maintain continuity and productivity during adverse events.

RECOMMENDATION 14

Expand awareness and preparedness campaigns for residents, visitors, and businesses about natural and human-caused hazards in Antigua and Barbuda.

RECOMMENDATION 15

Expand the Tsunami Ready Programme to all parishes within tsunami hazard zones.

RECOMMENDATION 16

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

RECOMMENDATION 17

Pursue opportunities to share successes and lessons learned from Antigua and Barbuda's capacity-building efforts, including the Tsunami Ready Programme and Safe School Initiative, to support climate resilience and risk reduction strategies nationally and internationally.

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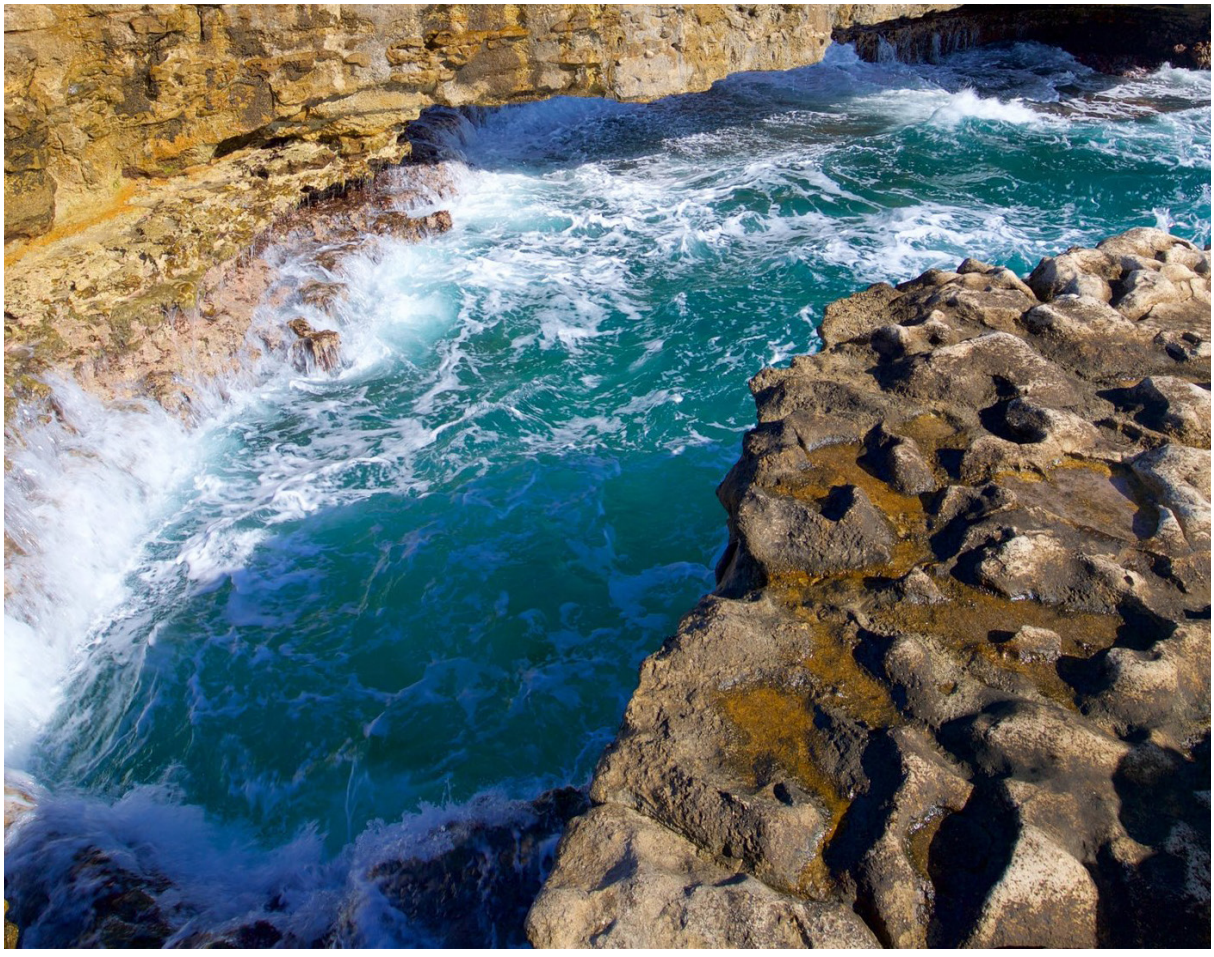
ANTIGUA AND BARBUDA PARISH RISK PROFILES

PARISH RISK PROFILES

The subnational report developed for each parish offers a more detailed understanding of risk in Antigua and Barbuda. 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.

Download Here:
https://www.pdc.org/wp-content/uploads/NDPBA-Antigua_and_Barbuda-Subnational-Profiles_merge.pdf



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