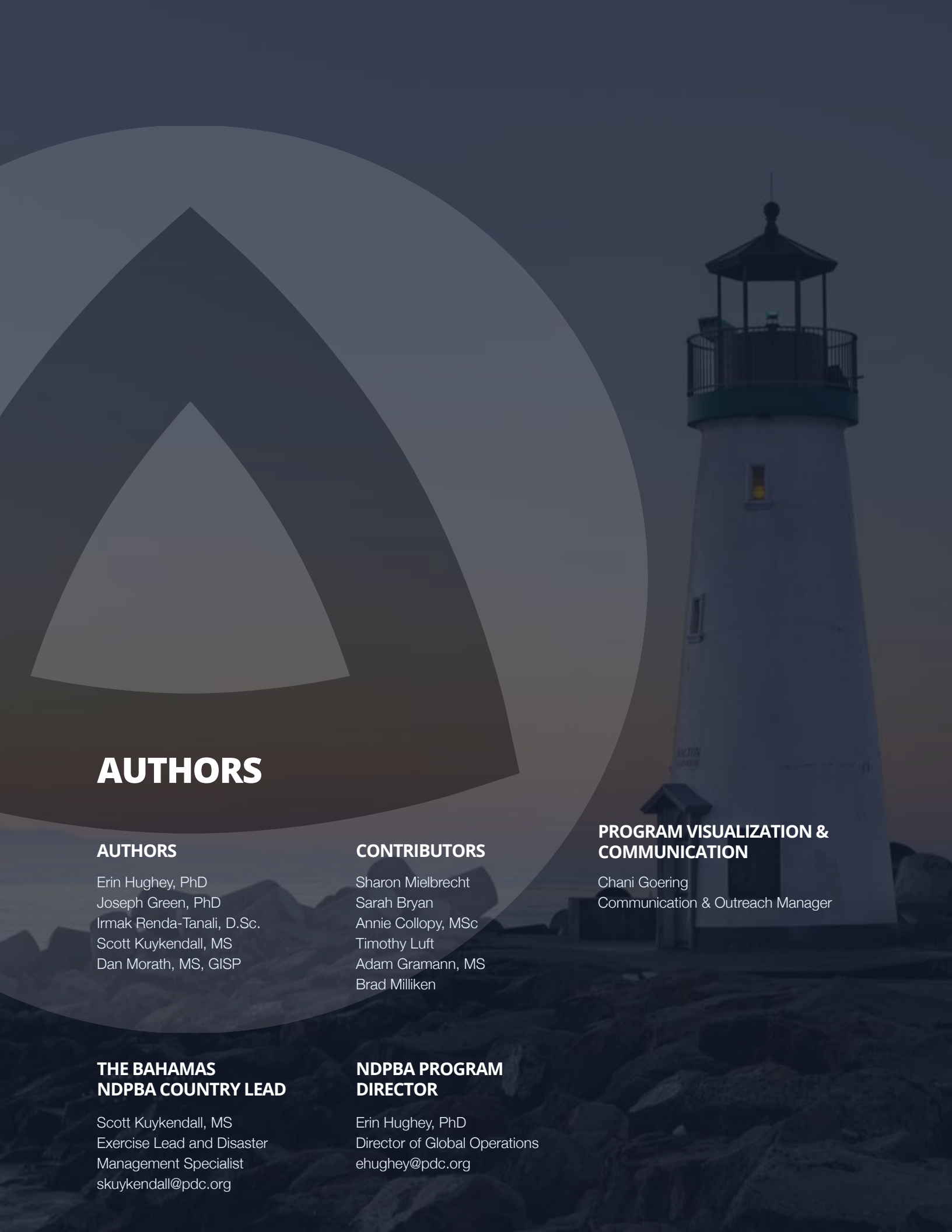
THE BAHAMAS
NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT
EXECUTIVE SUMMARY

PDC | GLOBAL



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Pacific Disaster Center (PDC) would like to offer a heartfelt “mahalo” and acknowledge all of the agencies and organizations who took the time to provide input and guidance leading to the completion of this report, including all of the representatives who contributed to the NDPBA workshops, surveys, interviews, data validation, and analyses. We offer a special thanks to the National Emergency Management Agency for their exemplary leadership throughout the project, as well as their remarkable commitment to saving lives, reducing losses, and building a safer, more disaster-resilient Bahamas.

- Airport Authority
- Bahamas Central Bank
- Bahamas Civil Aviation Authority
- Bahamas Development Bank
- Bahamas Environment, Science and Technology Commission
- Bahamas Information Services Department
- Bahamas National Geographic Information Systems Center
- Bahamas Power and Light
- Bahamas Red Cross
- Bahamas Salvation Army
- Bahamas Strong
- Bahamas Telecommunication Corporation
- Caribbean Disaster Emergency Management Agency
- Department of Civil Aviation
- Department of Environmental Health
- Department of Gender and Family Affairs
- Department of Land and Survey
- Department of Local Government
- Department of Meteorology
- Department of Public Health
- Department of Public Works
- Department of Social Services
- Department of Statistics
- Department of Transformation and Digitization
- Disaster Reconstruction Authority
- Ministry for Disaster Preparedness, Management, and Reconstruction
- Ministry of Agriculture and Marine Resources
- Ministry of Education
- Ministry of the Environment
- Ministry of Finance
- Ministry of Foreign Affairs
- Ministry of Health
- Ministry of Public Works

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THE BAHAMAS NATIONAL DISASTER PREPAREDNESS BASELINE ASSESSMENT

OVERVIEW

PDC's National Disaster Preparedness Baseline Assessment (NDPBA) is more than just an assessment, it's a sustainable system for understanding, updating, accessing, and applying critical risk information in decision making. The NDPBA provides the necessary tools, scientific data, and evidence-based practices to effectively reduce disaster risk—informing decisions at the national, island, and community levels. The NDPBA includes a Risk and Vulnerability Assessment (RVA) which examines several components of risk including hazard exposures, vulnerability, island capacity, and logistics capacity. These findings are further reviewed through the lens of PDC's unique Disaster Management Analysis (DMA). The DMA contextualizes the RVA, and guides recommendations designed to increase resilience and reduce disaster risk.

PDC worked in partnership with the National Emergency Management Agency (NEMA) to integrate national priorities and stakeholder feedback throughout every step of the process. Findings of this analysis were compiled into a Disaster Risk Reduction (DRR) Plan offering practical actions to be taken over a five-year period. The NDPBA provides The Bahamas with the essential tools and data for disaster risk monitoring while aligning recommended actions with United Nations Development Goals and the Sendai Framework for Disaster Risk Reduction 2015-2030.

The NDPBA was conducted during response to Hurricane Dorian, a Category 5 storm, and the Global COVID Pandemic. These events presented challenges and opportunities in helping to understand and actively observe the capabilities of The Bahamas disaster management structure. The NDPBA was funded by the United States Government through US Northern Command (USNORTHCOM) and conducted in coordination with US Embassy Nassau.

COUNTRY BACKGROUND AND OVERVIEW

GEOGRAPHY

West Indies
Location in the World

3,865 sq mi
Land Area (10,101 km^2)

5,359 sq mi
Total Area (13,880 km^2 Including Water)

700
Islands (19 Populated)

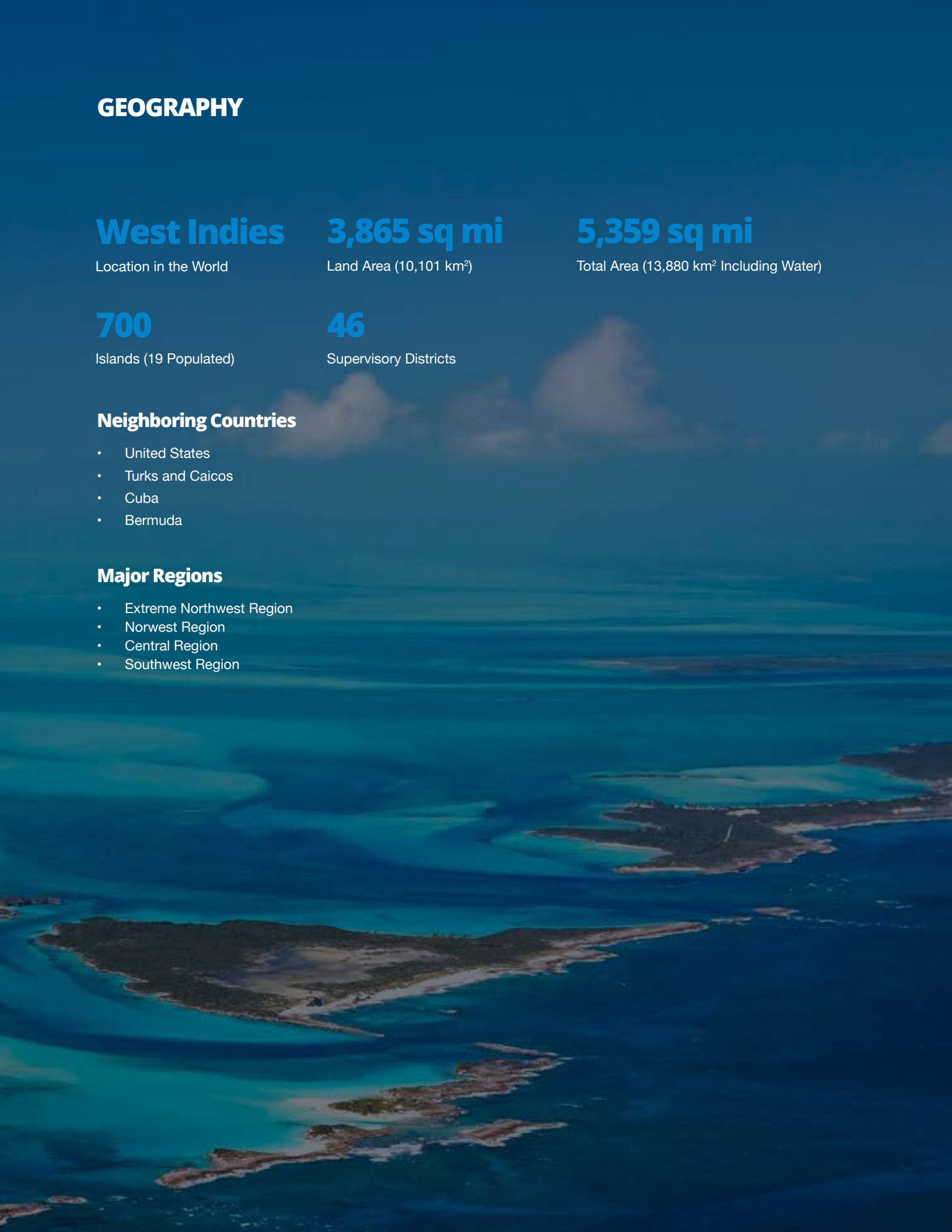
46
Supervisory Districts

Neighboring Countries

- United States
- Turks and Caicos
- Cuba
- Bermuda

Major Regions

- Extreme Northwest Region
- Norwest Region
- Central Region
- Southwest Region



DEMOGRAPHICS

351,461
Total population

65.3 per sq mi / 25.2 km²
Population density

85% African population
12% European population
3% Asian population
3% Latin American population

70%
of total population lives in New Providence

1.6%
Average annual population growth (2000-2010)

2.0
Physicians per 1k people

4.6
Nurses per 1k people

3
Hospital beds per 1k people

73.9
Average life expectancy

> 95%
Adult literacy

ECONOMY

GDP and Key Exports

$ 11.25 Billion (USD)
GDP (current)

14.8%
People living below national poverty line (2017)

17.2%
Family Islands poverty rate

9.4%
Grand Bahama poverty rate

12.4%
New Providence poverty rate

Fuel and oil

Boats

Polymers

Beverages

Shellfish

Cyclic compounds

Paintings

Primary Means of Income

Tourism

International financial services

LOGISTICS

Regional ports, airports, and roads:

- There are Official Ports of Entry on 12 island.
- The main commercial ports are Nassau and Freeport.
- Many smaller ports and harbors allow for extensive maritime traffic.
- There are 54 total airports, airfields, and sea plane bases.
- There is a system of ferries, mail boats to service smaller islands..
- Many islands have one main road traversing the island. Roads on larger, more populated islands (New Providence, Grand Bahamas) are sufficient but in disrepair.

Potential logistical impacts and vulnerabilities exist. An archipelago requires marine or air transportation for essential supplies, emergency relief, medical, goods, and services unless on New Providence or Grand Bahama.

KEY INFRASTRUCTURE

Transportation and Other Key Infrastructure

54 Airports including airfields, sea-plane bases

54 Seaports

141 Financial services

373 Hotels and resorts

177 Schools

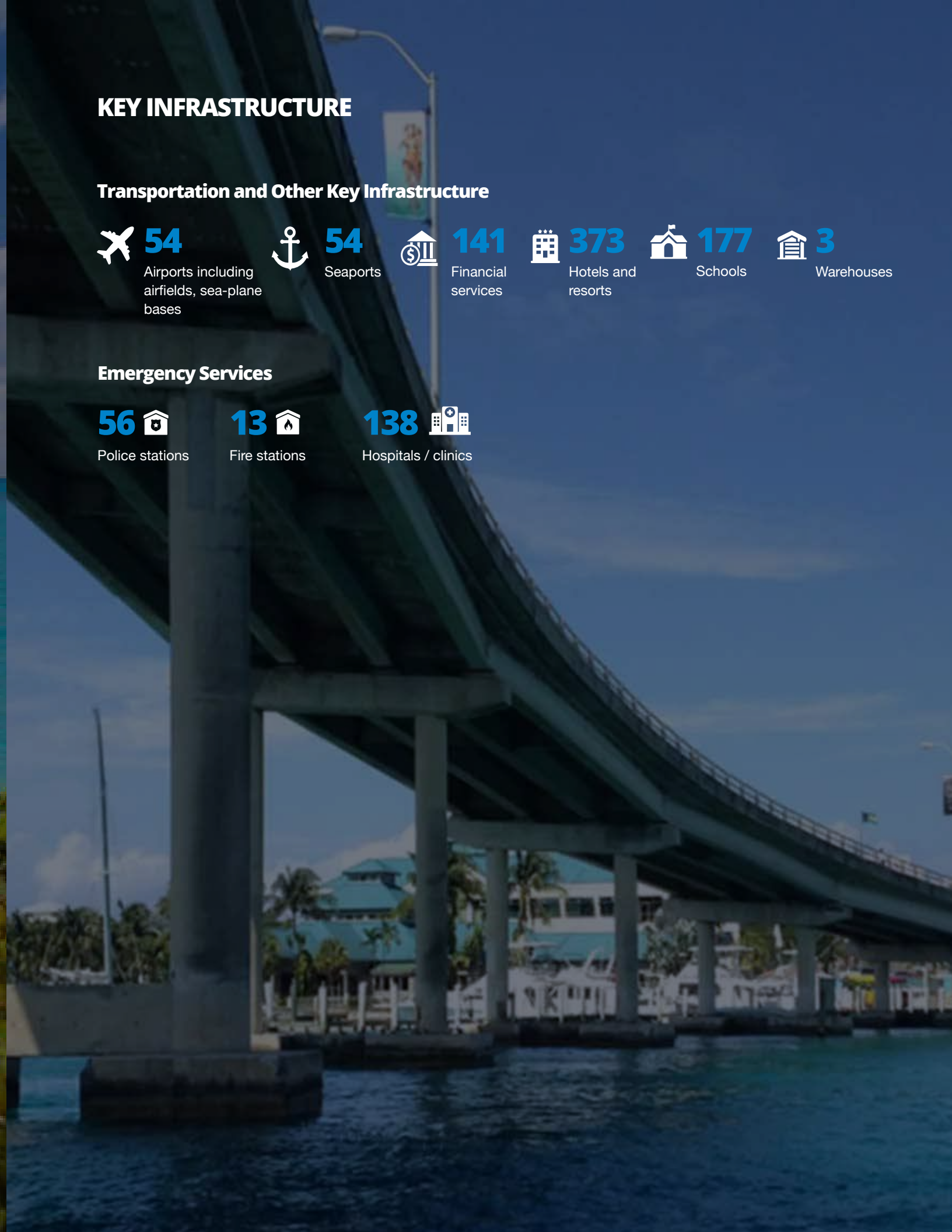
3 Warehouses

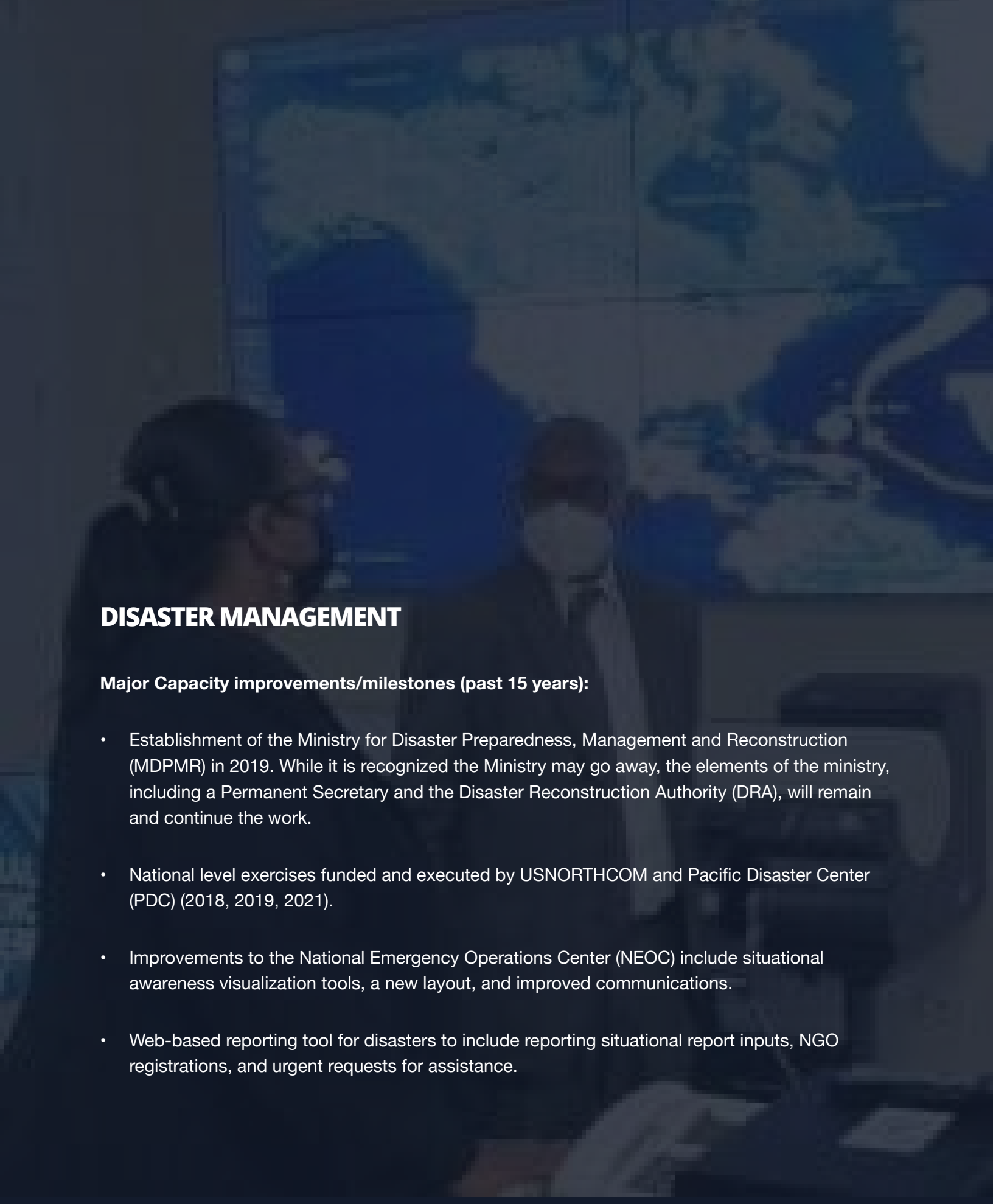
Emergency Services

56 Police stations

13 Fire stations

138 Hospitals / clinics





DISASTER MANAGEMENT

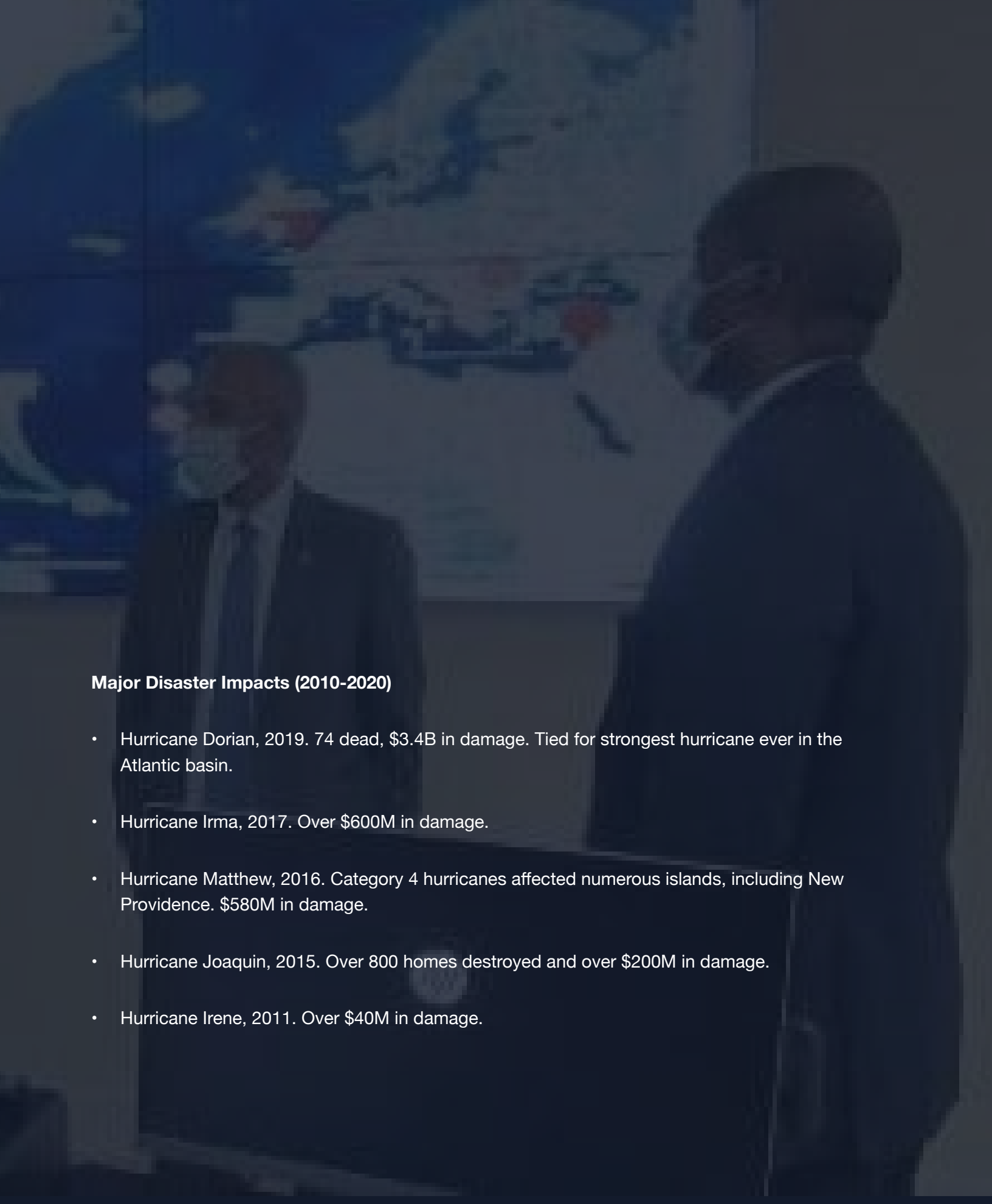
Major Capacity improvements/milestones (past 15 years):

- Establishment of the Ministry for Disaster Preparedness, Management and Reconstruction (MDPMR) in 2019. While it is recognized the Ministry may go away, the elements of the ministry, including a Permanent Secretary and the Disaster Reconstruction Authority (DRA), will remain and continue the work.

- National level exercises funded and executed by USNORTHCOM and Pacific Disaster Center (PDC) (2018, 2019, 2021).

- Improvements to the National Emergency Operations Center (NEOC) include situational awareness visualization tools, a new layout, and improved communications.

- Web-based reporting tool for disasters to include reporting situational report inputs, NGO registrations, and urgent requests for assistance.



Major Disaster Impacts (2010-2020)

- Hurricane Dorian, 2019. 74 dead, $3.4B in damage. Tied for strongest hurricane ever in the Atlantic basin.
- Hurricane Irma, 2017. Over $600M in damage.
- Hurricane Matthew, 2016. Category 4 hurricanes affected numerous islands, including New Providence. $580M in damage.
- Hurricane Joaquin, 2015. Over 800 homes destroyed and over $200M in damage.
- Hurricane Irene, 2011. Over $40M in damage.

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 The Bahamas National Disaster Preparedness Baseline Assessment. For details on the methodology and data sets used see Appendix A.

THE BAHAMAS

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 Bahamas National Disaster Preparedness Baseline Assessment: Tropical Cyclone (Hurricane) Wind, Storm Surge, Flooding, Wildfire, Landslides, Sea-level Rise

Global Multi-Hazard Exposure Rank (PDC Global RVA)

53 OUT OF 216 COUNTRIES / TERRITORIES ASSESSED

The Bahamas' Multi-Hazard Exposure Rank among Latin America and the Caribbean

22 OUT OF 39 COUNTRIES / TERRITORIES ASSESSED

THE BAHAMAS' HAZARD ZONES

TROPICAL CYCLONE WIND

100%
Relative Population Exposure

384,408
Raw Population Exposure

$40.9 billion
Raw Economic Exposure (USD)

STORM SURGE

48%
Relative Population Exposure

184,326
Raw Population Exposure

$14.5 billion
Raw Economic Exposure (USD)

FLOODING

24%
Relative Population Exposure

92,786
Raw Population Exposure

$7.9 billion
Raw Economic Exposure (USD)

WILDFIRE

12%
Relative Population Exposure

47,711
Raw Population Exposure

$5.6 billion
Raw Economic Exposure (USD)

LANDSLIDE

1.3%
Relative Population Exposure

5,175
Raw Population Exposure

$670 million
Raw Economic Exposure (USD)

SEA-LEVEL RISE

<1%
Relative Population Exposure

<500
Raw Population Exposure

$24 million
Raw Economic Exposure (USD)

Bahamas: Tropical Cyclone Wind Hazard Exposure

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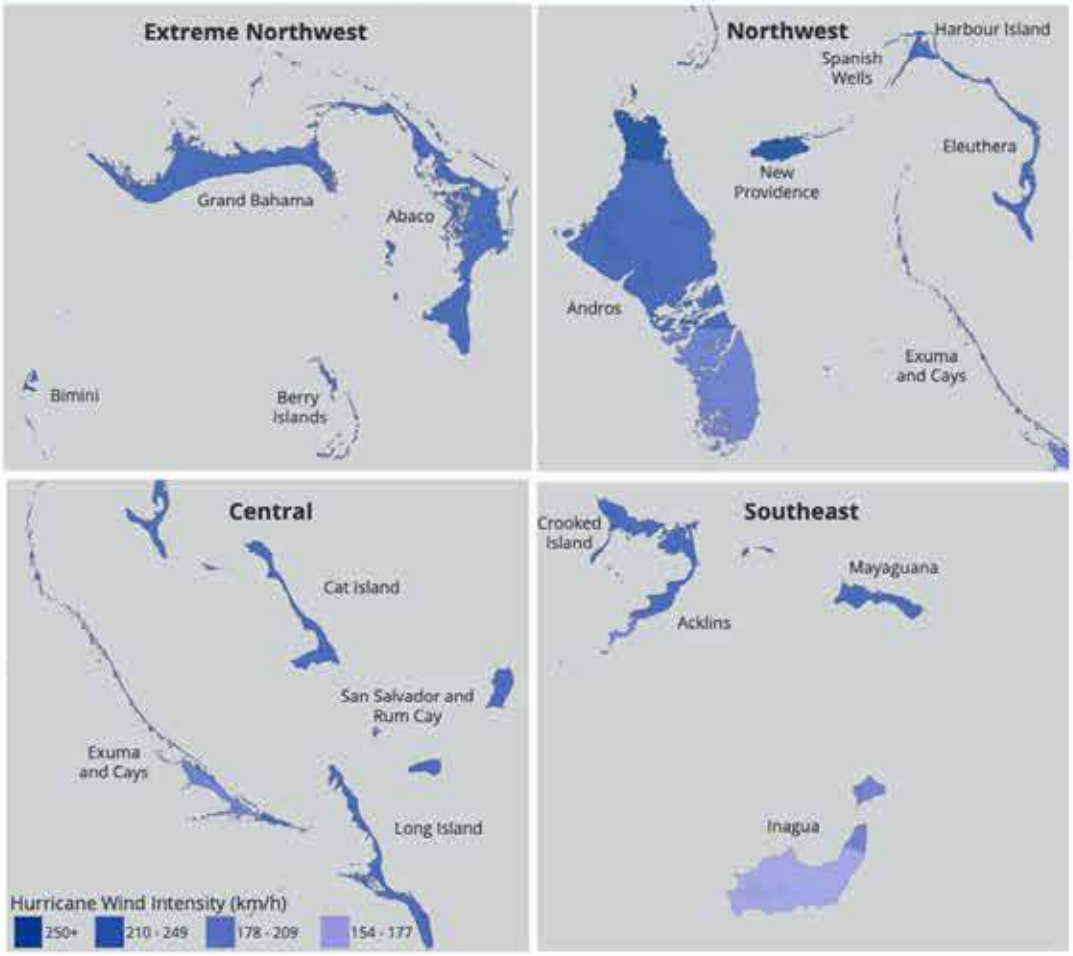
VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

384,408 (100%)

People exposed to hurricane wind (category 1 and higher)

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$40.9 Billion (100%)

Capital stock exposed to hurricane wind (category 1 and higher)

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

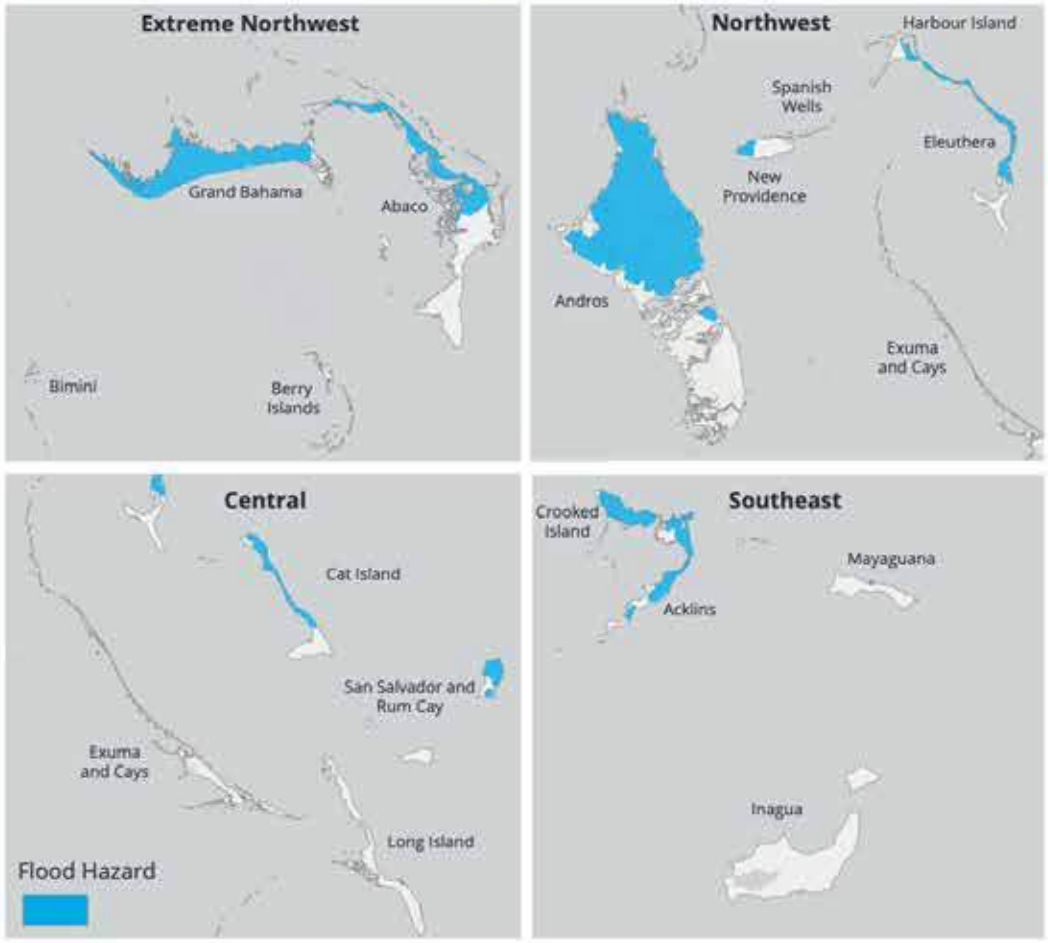
54 (100%)	54 (100%)	141 (100%)	373 (100%)	3 (100%)
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse

138 (100%)	13 (100%)	56 (100%)	177 (100%)
Hospitals and Clinics	Fire Stations	Police Stations	Schools

Bahamas: Flood Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

92,786 (24%)

People exposed to flood

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$7.9 Billion (19%)

Capital stock exposed to flood

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

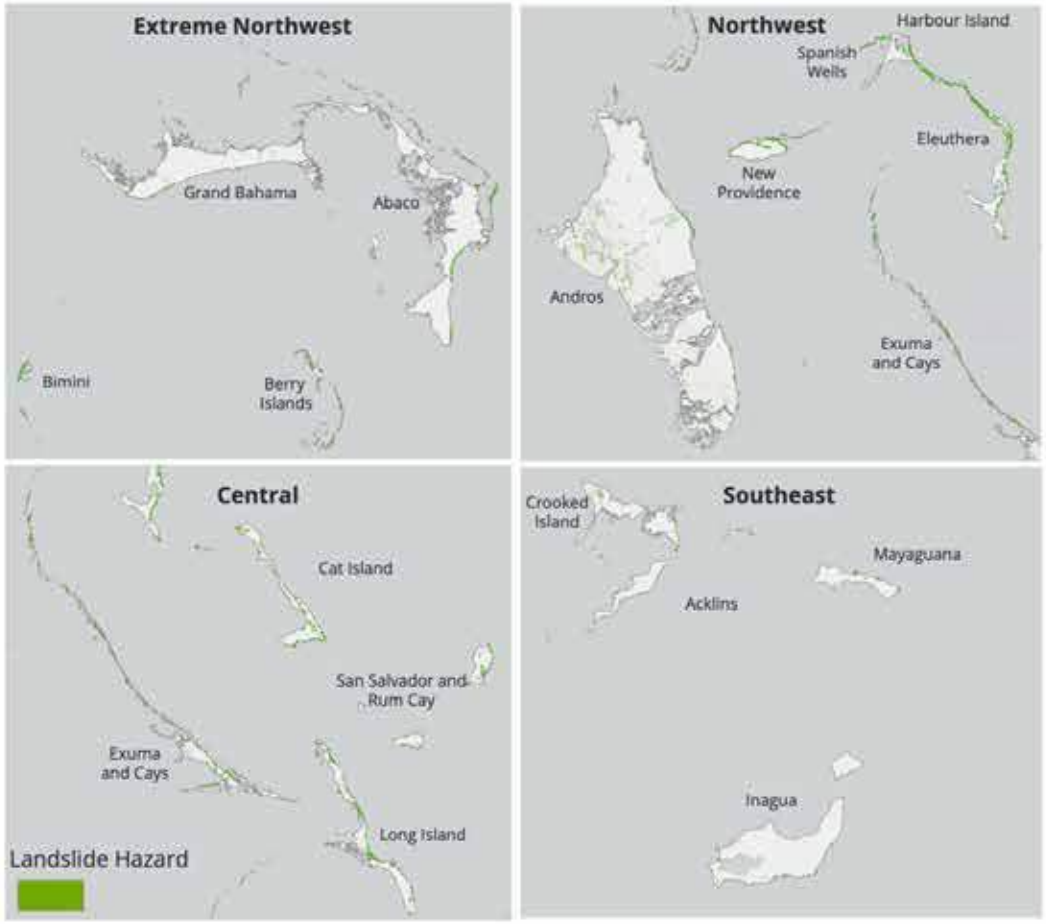
10 (19%)	**13** (24%)	**29** (21%)	**60** (16%)	**1** (33%)
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse

43 (31%)	**3** (23%)	**21** (38%)	**50** (28%)
Hospitals and Clinics	Fire Stations	Police Stations	Schools

Bahamas: Landslide Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

5,175 (1.3%)

People exposed to landslide

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$670 Million (1.6%)

Capital stock exposed to landslide

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

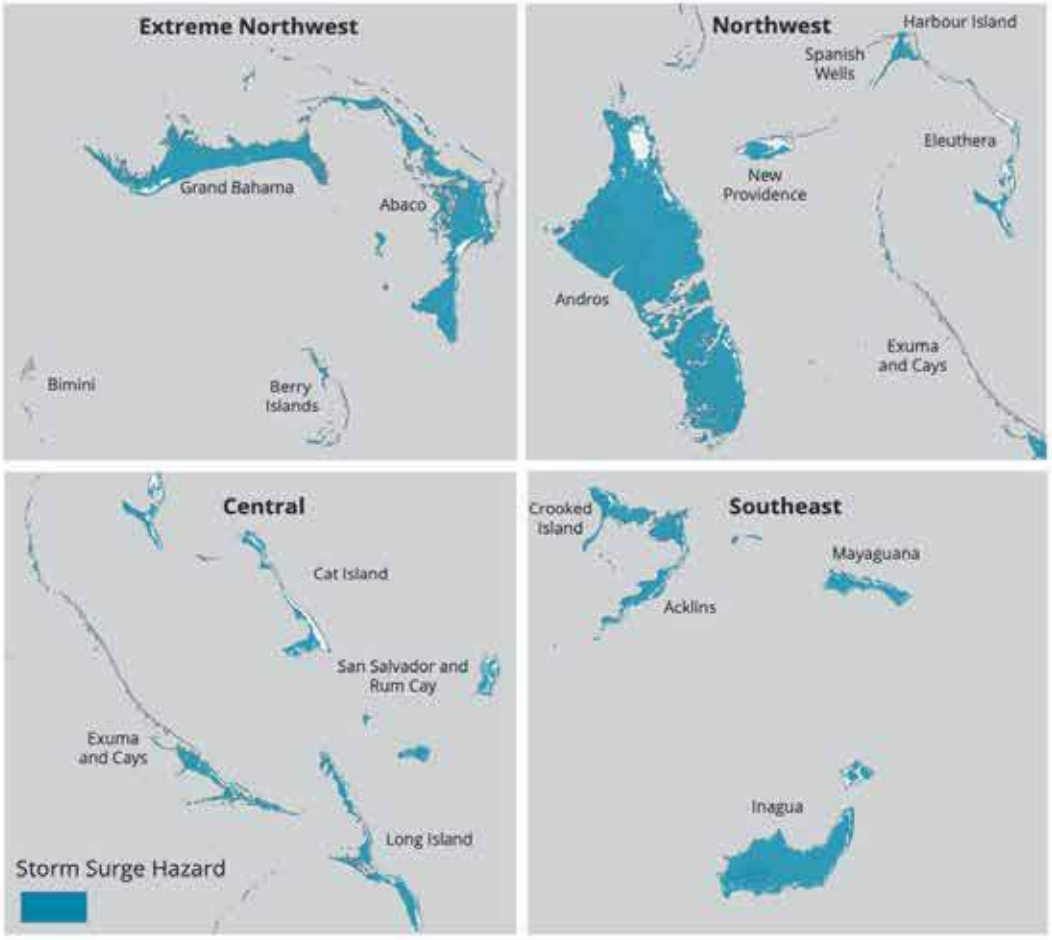
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse
0 (0%)	0 (0%)	0 (0%)	11 (3%)	0 (0%)

Hospitals and Clinics	Fire Stations	Police Stations	Schools
0 (0%)	0 (0%)	0 (0%)	0 (0%)

Bahamas: Storm Surge Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

184,326 (48%)

People exposed to storm surge (category 1 and higher)

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$14.5 Billion (35%)

Capital stock exposed to storm surge (category 1 and higher)

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

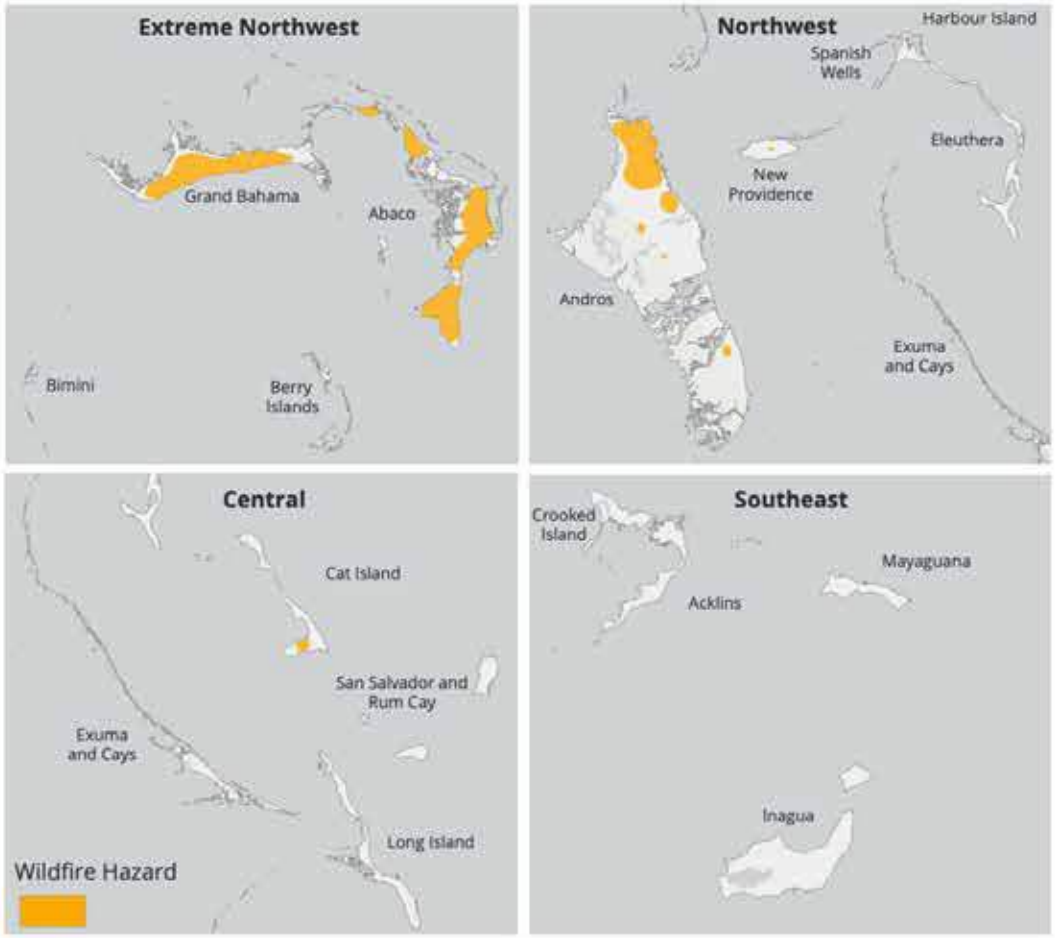
46 (85%)	54 (100%)	57 (41%)	172 (39%)	1 (33%)
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse

71 (51%)	8 (62%)	38 (68%)	90 (52%)
Hospitals and Clinics	Fire Stations	Police Stations	Schools

Bahamas: Wildfire Hazard Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

47,711 (12%)

People exposed to wildfire

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$5.6 Billion (14%)

Capital stock exposed to wildfire

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

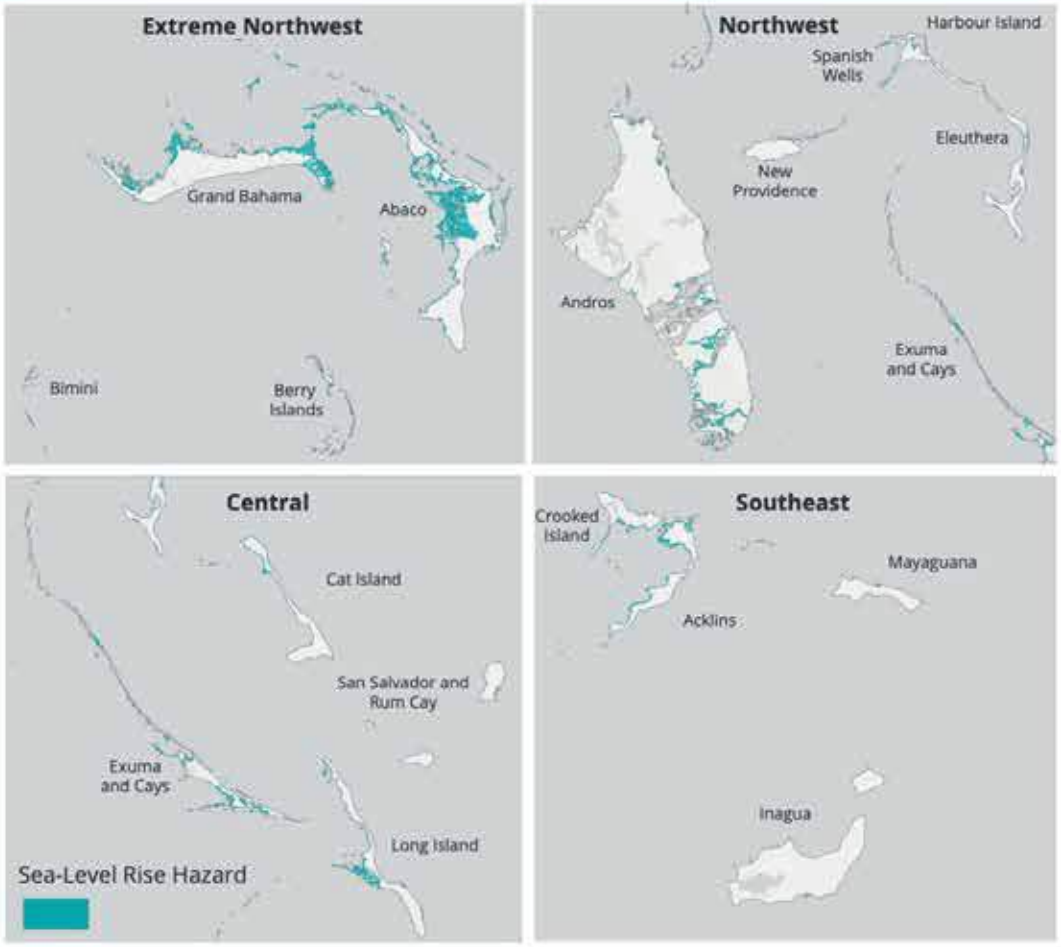
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse
5 (9%)	0 (0%)	17 (12%)	27 (7%)	0 (0%)

Hospitals and Clinics	Fire Stations	Police Stations	Schools
17 (12%)	2 (15%)	7 (13%)	33 (28%)

Bahamas: Sea-Level Rise Exposure

PDC | GLOBAL

VIEW IN DISASTERAWARE



MAXIMUM POTENTIAL POPLATION EXPOSURE

<500 (<1%)

People exposed to sea-level rise

MAXIMUM POTENTIAL ECONOMIC EXPOSURE

$24 Million (<1%)

Capital stock exposed to sea-level rise

CRITICAL INFRASTRUCTURE EXPOSED

Critical infrastructure exposure for advanced planning and decision making.

1 (2%)	54 (100%)	0 (0%)	0 (0%)	0 (0%)
Airports	Seaports	Financial Services	Hotels & Resorts	Warehouse

0 (0%)	0 (0%)	0 (0%)	0 (0%)
Hospitals and Clinics	Fire Stations	Police Stations	Schools

MULTI-HAZARD EXPOSURE BY ISLAND

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	Grand Bahama	0.964
	2	Abaco	0.689
	3	Andros	0.564
HIGH	4	New Providence	0.542
	5	Eleuthera	0.502
	6	Acklins	0.469
MODERATE	7	Crooked Island	0.441
	8	Cat Island	0.423
	9	San Salvador and Rum Cay	0.408
LOW	10	Long Island	0.377
	11	Exuma and Cays	0.363
	12	Berry Islands	0.200
	13	Spanish Wells	0.200
VERY LOW	14	Inagua	0.170
	15	Mayaguana	0.133
	16	Bimini	0.114
	17	Harbour Island	0.111


Grand Bahama
Abaco
Bimini
Berry Islands
Harbour Island
Spanish Wells
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Acklins
Mayaguana
Inagua
Multi-Hazard Exposure Index
Very Low
Low
Moderate
High
Very High

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 are 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 Bahamas. Breaking down each 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)

89 OUT OF 204 COUNTRIES / TERRITORIES ASSESSED

The Bahamas' Vulnerability Rank among Latin America and the Caribbean

12 OUT OF 41 COUNTRIES / TERRITORIES ASSESSED

VULNERABILITY SUBCOMPONENTS AND INDICATORS

Population Pressures
Average Population Change
Foreign Arrivals Per Capita
Foreign Arrivals by Land Area
Net Migration

Gender Inequality
Female to Male Median Income
Female to Male Average Years of School
Adolescent Birth Rate

Household Composition
Disability
Population 65 and Older

Housing and Transportation
Homes Built Prior to 1980
Prevalence of Crowding
Population without a Private Vehicle

Economic Constrains
Poverty
Non-wage Earners
Economic Dependency Ratio
Government Benefits Received

Clean Water Access Vulnerability
Percentage of Households with Piped Water
Percentage of Households with Flush Toilets
Percentage of Households with Shared Toilet Facilities

Environmental Stress
Tree Cover Lost
Coral Reef Thermal Stress
Coral Reef Local Stress
Tropical Cyclone Frequency

VULNERABILITY BY ISLAND

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	Cat Island	0.548
	2	Spanish Wells	0.527
HIGH	3	Long Island	0.508
	4	Acklins	0.482
	5	Eleuthera	0.472
MODERATE	6	Abaco	0.465
	7	Exuma and Cays	0.465
	8	Andros	0.463
	9	Crooked Island	0.446
LOW	10	Bimini	0.432
	11	Berry Islands	0.427
	12	New Providence	0.419
	13	Harbour Island	0.399
VERY LOW	14	Mayaguana	0.387
	15	Grand Bahama	0.376
	16	San Salvador and Rum Cay	0.300
	17	Inagua	0.280


Grand Bahama
Abaco
Bimini
Berry Islands
Spanish Wells
Harbour Island
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Acklins
Mayaguana
Inagua
Vulnerability Index
Very Low
Low
Moderate
High
Very High

THE RVA

ISLAND CAPACITY

ISLAND CAPACITY

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

ISLAND CAPACITY SUBCOMPONENTS AND INDICATORS

Economic Capacity
- Median Income
- Households Receiving Remittances

Governance
- Voter Participation
- Percentage of Households with Unmet Need for Refuse Collection
- Crime Rate per 10,000 persons

Environmental Capacity
- Protected Area
- Standing Fish Stock
- Coastline Protected by Natural Habitat

Communications Capacity
- Mobile Phone Coverage Area
- Internet Access

Healthcare Capacities
- Physicians per 10,000 Persons
- Nurses and Midwives per 10,000 Persons
- Clinics per 10,000 Persons
- DTP Vaccination Coverage

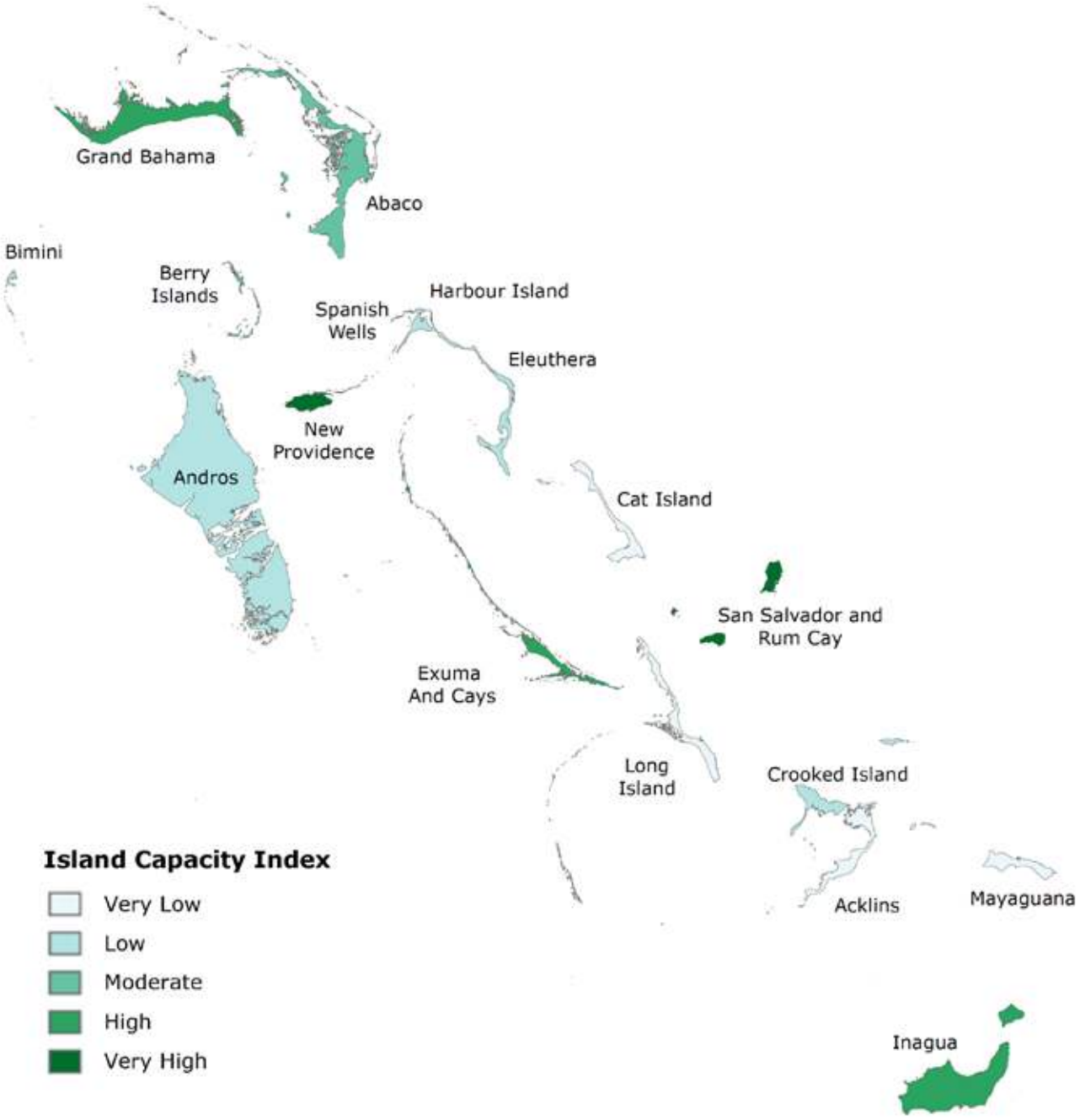
Energy Capacity
- Households with Electricity Access
- Households with Access to Liquid Propane Gas

Emergency Services Capacity
- Ambulances per 100,000 Persons
- Distance to Fire Station
- Distance to Warehouse

Transportation Capacity
- Shelter Capacity
- Average Distance to Shelter
- Average Distance to Police Station

ISLAND CAPACITY BREAKDOWN

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	San Salvador and Rum Cay	0.692
	2	Harbour Island	0.647
	3	New Providence	0.640
HIGH	4	Inagua	0.596
	5	Exuma and Cays	0.588
	6	Grand Bahama	0.559
MODERATE	7	Abaco	0.548
	8	Spanish Wells	0.460
	9	Berry Islands	0.430
LOW	10	Crooked Island	0.421
	11	Eleuthera	0.420
	12	Andros	0.411
	13	Bimini	0.397
VERY LOW	14	Long Island	0.394
	15	Cat Island	0.351
	16	Acklins	0.318
	17	Mayaguana	0.317


Grand Bahama
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Bimini
Berry Islands
Harbour Island
Spanish Wells
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Acklins
Mayaguana
Inagua
Island Capacity Index
Very Low
Low
Moderate
High
Very High

THE RVA

LOGISTICS CAPACITY

LOGISTICS CAPACITY

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

LOGISTICS CAPACITY SUBCOMPONENTS AND INDICATORS

Distance to Port

Distance to International Airport

Distance to Warehouse

LOGISTICS CAPACITY BY ISLAND

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	New Providence	1.000
	1	Grand Bahama	1.000
HIGH	3	Abaco	0.966
	4	Exuma and Cays	0.951
	5	Andros	0.900
MODERATE	6	Spanish Wells	0.874
	6	Eleuthera	0.874
	8	Berry Islands	0.857
	9	Bimini	0.833
	10	Harbour Island	0.826
LOW	11	Cat Island	0.816
	12	Long Island	0.783
	13	San Salvador and Rum Cay	0.773
	14	Ragged Island	0.537
VERY LOW	15	Crooked Island	0.531
	16	Acklins	0.445
	17	Mayaguana	0.209
	18	Inagua	0.100


Grand Bahama
Abaco
Bimini
Berry Islands
Spanish Wells
Harbour Island
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Ragged Island
Acklins
Mayaguana
Inagua
Logistics Capacity Index
Very Low
Low
Moderate
High
Very High

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 in The Bahamas was calculated by using a combination of Island Capacity and Logistics Capacity.

Global Coping Capacity Rank (PDC Global RVA)

43 OUT OF 198 COUNTRIES / TERRITORIES ASSESSED

The Bahamas' Coping Capacity Rank among Latin America and the Caribbean

3 OUT OF 35 COUNTRIES

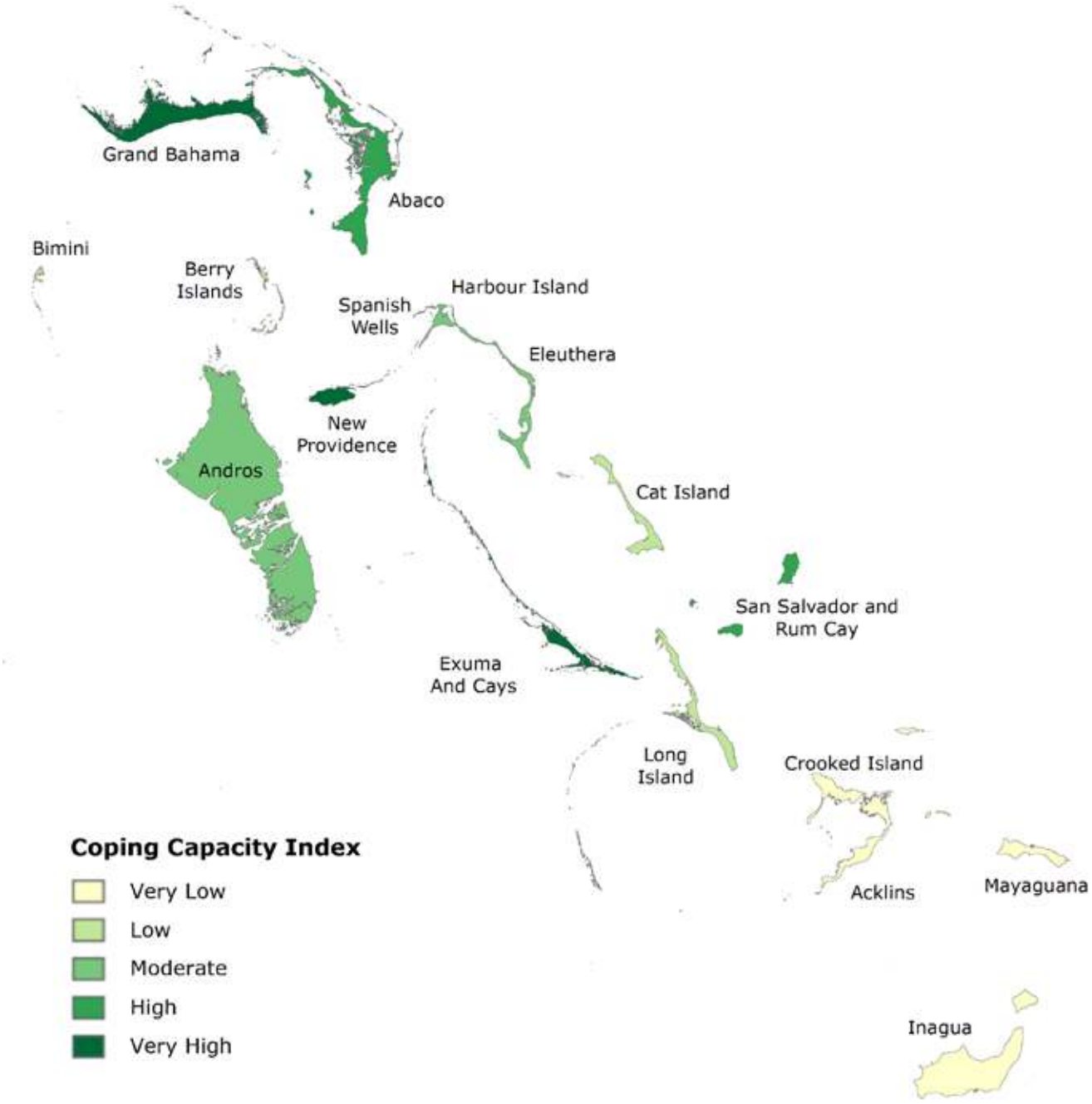
COPING CAPACITY COMPONENTS

Island Capacity

Logistics Capacity

COPING CAPACITY BY ISLAND

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	New Providence	0.822
	2	Grand Bahama	0.782
	3	Exuma and Cays	0.771
HIGH	4	Abaco	0.759
	5	Harbour Island	0.737
	6	San Salvador and Rum Cay	0.733
MODERATE	7	Spanish Wells	0.669
	8	Andros	0.658
	9	Eleuthera	0.650
LOW	10	Berry Islands	0.646
	11	Bimini	0.617
	12	Long Island	0.590
	13	Cat Island	0.586
VERY LOW	14	Crooked Island	0.476
	15	Acklins	0.382
	16	Inagua	0.351
	17	Mayaguana	0.263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Crooked Island
Acklins
Mayaguana
Inagua
Coping Capacity Index
Very Low
Low
Moderate
High
Very High

THE RVA

RESILIENCE

RESILIENCE

Resilience in The Bahamas was calculated by using a combination of Vulnerability, and Coping Capacity (Island Capacity and Logistics Capacity). Results are displayed across each Island below, while the four main drivers of resilience and detailed recommendations are provided in the detailed Island profiles.

Global Resilience Rank (PDC Global RVA)

58 OUT OF 194 COUNTRIES / TERRITORIES ASSESSED

The Bahamas' Resilience Rank among Latin America and the Caribbean

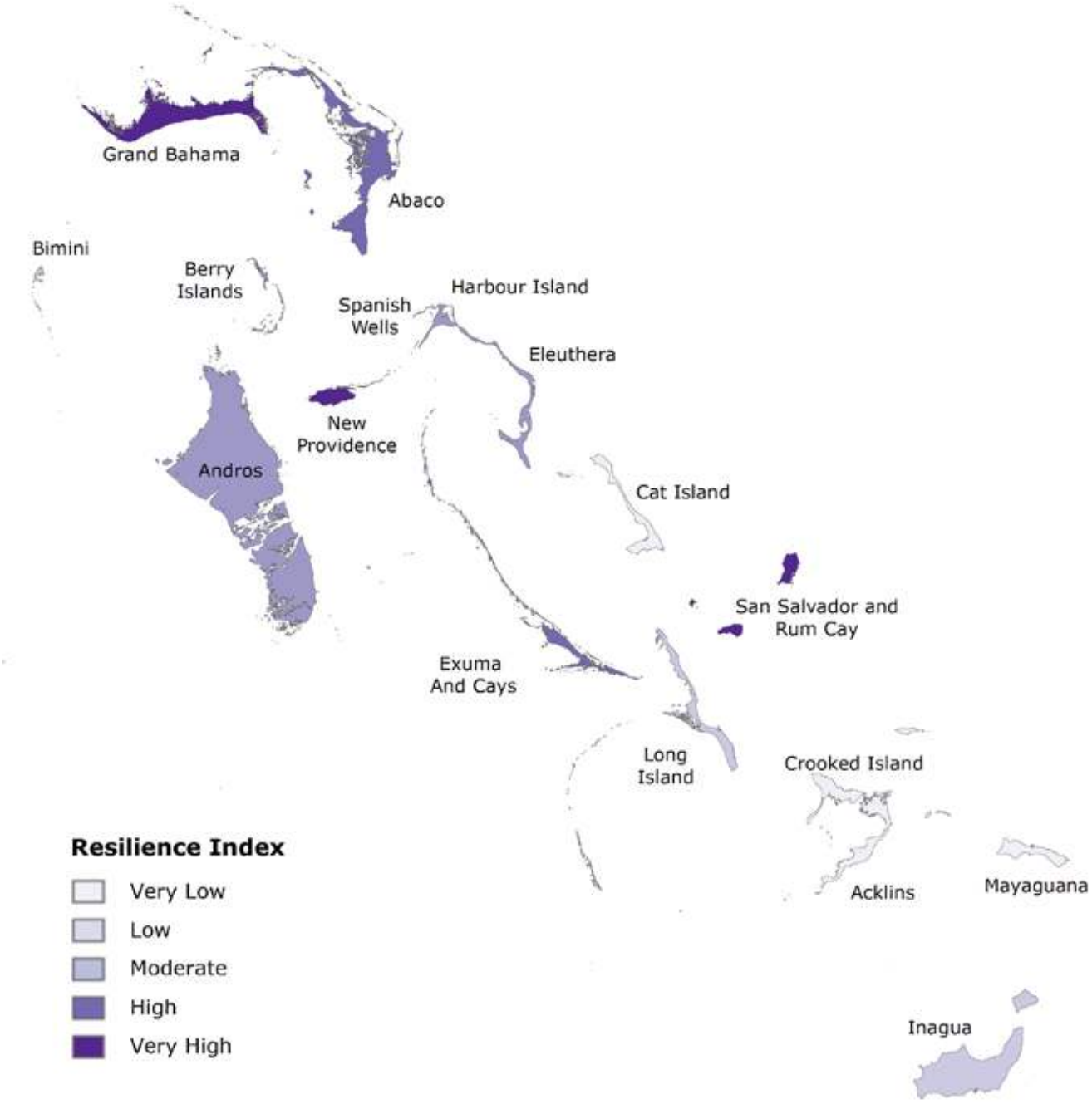
8 OUT OF 35 COUNTRIES

RESILIENCE COMPONENTS

Vulnerability **Island Capacity** **Logistics Capacity**

RESILIENCE BY ISLAND

VERY HIGH	1	New Providence	0.627
	2	Grand Bahama	0.608
	3	San Salvador and Rum Cay	0.604
HIGH	4	Exuma and Cays	0.572
	5	Harbour Island	0.569
	6	Abaco	0.563
MODERATE	7	Berry Islands	0.502
	8	Andros	0.496
	9	Eleuthera	0.489
LOW	10	Bimini	0.484
	11	Spanish Wells	0.482
	12	Inagua	0.443
	13	Long Island	0.441
VERY LOW	14	Cat Island	0.425
	15	Crooked Island	0.408
	16	Acklins	0.350
	17	Mayaguana	0.349


Grand Bahama
Abaco
Bimini
Berry Islands
Spanish Wells
Harbour Island
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Acklins
Mayaguana
Inagua
Resilience Index
Very Low
Low
Moderate
High
Very High

THE RVA

MULTI-HAZARD RISK

MULTI-HAZARD RISK

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

Multi-hazard risk in The Bahamas was calculated by averaging multi-hazard exposure, vulnerability, and coping capacity (Island Capacity and Logistics Capacity). Results are displayed below, detailed analysis for each Island can be found in the individual Island Profiles.

Global Multi-hazard Risk Rank (PDC Global RVA)

107 OUT OF 193 COUNTRIES / TERRITORIES ASSESSED

The Bahamas' Multi-Hazard Risk Rank among Latin America and the Caribbean

28 OUT OF 35 COUNTRIES

MULTI-HAZARD RISK COMPONENTS

Multi-Hazard Exposure

Vulnerability

Island Capacity

Logistics Capacity

MULTI-HAZARD RISK BY ISLAND

	RANK	ISLAND	INDEX SCORE
VERY HIGH	1	Acklins	0.530
	2	Crooked Island	0.475
	3	Cat Island	0.455
HIGH	4	Andros	0.431
	5	Long Island	0.429
	6	Eleuthera	0.425
MODERATE	7	Abaco	0.395
	8	Grand Bahama	0.388
	9	Mayaguana	0.377
LOW	10	Inagua	0.345
	11	Spanish Wells	0.335
	12	Exuma and Cays	0.325
	13	Berry Islands	0.322
VERY LOW	14	New Providence	0.316
	15	San Salvador and Rum Cay	0.311
	16	Bimini	0.287
	17	Harbour Island	0.238


Grand Bahama
Abaco
Bimini
Berry Islands
Spanish Wells
Harbour Island
Eleuthera
New Providence
Andros
Cat Island
San Salvador and Rum Cay
Exuma And Cays
Long Island
Crooked Island
Acklins
Mayaguana
Inagua
Multi-Hazard Risk Index
Very Low
Low
Moderate
High
Very High

THE DMA

DISASTER MANAGEMENT ANALYSIS

SUMMARY OF FINDINGS

DISASTER MANAGEMENT

ANALYSIS RESULTS

Provided in this section are the results of the Disaster Management Analysis (DMA) conducted as part of The Bahamas National Disaster Preparedness Baseline Assessment. The outcome enables more effective prioritization of risk-reduction and resilience-building initiatives and investments. Considering diverse island needs, operational successes, and barriers, the DMA examined the following six core disaster management themes: Institutional Arrangements; Enabling Environment; Disaster Governance Mechanisms; Capabilities and Resources; Capacity Development; and Communications and Information Management.

Understanding that disaster management is a continuum where islands and nations will move along making progress from Limited to No Capacity to Advanced Capacity, the results of The Bahamas DMA analysis show that the nation has reached Achievement with Significant Limitations (yellow).

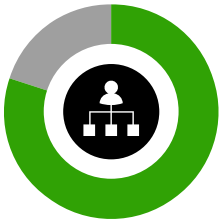
DISASTER MANAGEMENT

ANALYSIS RESULTS

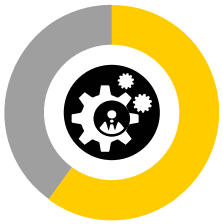
CURRENT STATUS

Limited or No Capacity — Advanced Capacity

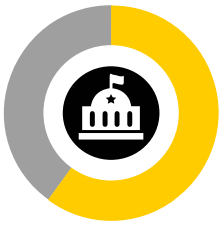
DISASTER MANAGEMENT ANALYSIS THEME AND SUBTHEMES



Institutional Arrangements
Organizational Structures
Leadership Arrangements
Mechanisms for Stakeholder Engagement

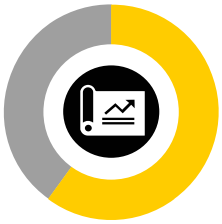


Capabilities and Resources
Dedicated Facilities and Equipment
Human Resources
Inventory of Commodities and Supplies
Targeted Functional Capabilities

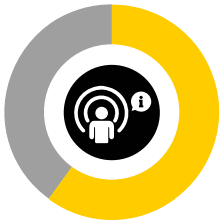


Enabling Environment
Legal Instruments
Financial Resources
Strategies
Public Confidence and Political Support
Attitudes and Experience

Capacity Development
Capacity Development Plans and Strategies
Training and Education Programs and Facilities
Certification Programs
After-action Reporting
Monitoring and Evaluation Processes and Systems



Disaster Governance Mechanisms
Plans
Standard Operating Procedures
Emergency Operations Centers
Command, Control, and Coordination Systems



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

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

DISASTER MANAGEMENT

ANALYSIS RESULTS

Major strengths for The Bahamas included strong Institutional Arrangements including well-defined organizational structures, strong leadership arrangements, and clear mechanisms for stakeholder engagement.

A limiting factor to The Bahamas reaching advanced capacity is related to limitations with Capacity Development. The ability of The Bahamas to advance disaster management strategies that achieve risk reduction and resilience goals is ultimately dependent on the nation's 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, and facilities that support a whole of community and whole of government approach. This is one area where The Bahamas can make improvements that will have a positive amplifying effect on all areas of disaster management.

THE DMA

INSTITUTIONAL ARRANGEMENTS

INSTITUTIONAL ARRANGEMENTS

The organizational and institutional structures through which disaster management capacity forms are indications of The Bahamas' 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 revealed. The DMA component of Institutional Arrangements examined the existing disaster management organizational structures, leadership arrangements, and mechanisms for stakeholder engagement.

Findings indicate The Bahamas' institutional arrangements have made substantial progress, with some limitations.

The Bahamas has a well-organized and structured Disaster Management program; however, the overall organization devolves as distance from the capital increases. Few of the Family Islands have a NEMA-like structure or appropriate mechanisms to effectively interface with NEMA headquarters in Nassau. The Disaster Preparedness and Response Act (DPRA) 2006 outlines the organizational structure of NEMA. Progress towards reaching the Sendai goals has been limited. Due to a lack of trained personnel NEMA cannot easily take on significant responsibilities for the program. While Family Island Administrators (FIAs) lead their respective islands during disasters with support from NEMA, no clear career paths, or minimum qualifications are identified for NEMA personnel or Disaster Consultative Committee (DCC) members on the Family Islands. While NEMA executes DRR activities, no office or designated official leads DRR efforts in The Bahamas to align with the Sendai Framework.

As an archipelagic nation, climate change is of significant concern to The Bahamas. While Climate Change Adaptation (CCA) is a recognized need in The Bahamas, the resources have yet to be appropriately applied. To date, the vast majority of the Bahamas Environment Science and Technology (BEST) Commission's climate change analysis and input into a CCA Platform have been limited. The efforts to integrate DRR, CCA, and SDGs have not yet been fully realized. The National Development Plan: Vision 2040 remains in its second draft and is yet to be approved by the Parliament. Some ministries are using the Plan as a guide to shape their work and adjust responsibilities. A ratified Vision 2040 would provide the necessary policy guidance to support comprehensive action.

The Bahamas has effective international partnerships with neighboring countries and with the Caribbean Disaster Emergency Management Agency (CDEMA). The Royal Bahamas Defense Force (RBDF) is a crucial component of The Bahamas National Disaster Plan and plays a significant role in almost all emergency functions in The Bahamas. However, stakeholder roles, especially in the private sector, lack definition and organization in practice. Formal mechanisms for integrating NGO capabilities into the country's disaster management system have only recently started.

INSTITUTIONAL ARRANGEMENTS

A1

FINDINGS

The Bahamas has a well-organized and structured DM program; however, the overall organization devolves as distance from the capital increases. The Family Islands lack the necessary training and equipment to effectively deal with hazards independently. Logistical challenges can further inhibit the immediate delivery of relief and support.

The Disaster Preparedness and Response Act 2006 outlines the organizational structure of NEMA.

RECOMMENDATIONS

- Create mechanisms to decentralize the DM structure by empowering the Family Island Administrators (FIAs) with the necessary training, equipment, and resources such that NEMA's role remains as the oversight agency.
- Review the organizational structure of the DPRA and ensure that it is still current and able to meet the needs of the nation.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 4

Global Target(s)

B, C, D, E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

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

INSTITUTIONAL ARRANGEMENTS

A2

FINDINGS

There are no clear career paths or minimum qualifications for NEMA personnel or DCC members on the Family Islands.

RECOMMENDATIONS

- Continue the development of NEMA's organization, job descriptions, and positional requirements.
- Require a mix of experience and/or academic qualifications for NEMA and DCC positions, increasing with seniority level.
- Work closely with supporting ministries to identify personnel with experience and qualifications to augment NEMA during disasters – in addition to Emergency Support Function (ESF) staff.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

B, C, D, E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

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

INSTITUTIONAL ARRANGEMENTS

A3

FINDINGS

FIAs execute plans on NEMA's behalf during disasters. FIAs are not NEMA employees but rather designated government representatives who allocate local/regional resources as directed by NEMA. Although FIAs receive brief training from NEMA before filling the role in the jurisdiction, emergency management is but one of many trainings they receive. The Administrator has a DCC of not less than five residents of each settlement who shall assist in disaster preparedness measures in the family islands.

RECOMMENDATIONS

- Develop a more comprehensive and regular training program for FIAs and DCCs.
- Leverage non-traditional training approaches - virtual and web-based training – island pairing from around the world as a way to expand knowledge and develop meaningful networks to strengthen local capabilities.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

B, C, D, E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

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

INSTITUTIONAL ARRANGEMENTS

A4

FINDINGS

The GoB signed the Hyogo Framework for Action (HFA) and the Sendai Framework for Disaster Risk Reduction. However, progress toward reaching those goals has been limited. As noted in "The Bahamas' Progress Towards Implementing the Hyogo Framework for Action" issued back in 2007, the main risk to the program in The Bahamas is NEMA's need to take on significant responsibilities for the program without the proper staffing to do so.

RECOMMENDATION

Through the help of academic institutions, particularly the University of The Bahamas (UB), create career pathways for disaster management and disaster risk reduction policy technocratic positions for NEMA.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

B, C, D, E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

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

INSTITUTIONAL ARRANGEMENTS

A5

FINDINGS

Disaster Risk Reduction does not yet exist as a standalone government-wide platform. NEMA participates in DRR efforts and has presented on DRR in The Bahamas at UNDRR Conferences with CDEMA. While NEMA executes DRR activities, there is no office or designated official who leads DRR efforts in The Bahamas to align with the Sendai Framework. Consistent with the findings of the Inter-American Development Bank (IDB)'s 2018 report, Index of Governance and Public Policy in Disaster Risk Management National Report (iGOPP) for The Bahamas, we recommend the GoB:

RECOMMENDATIONS

- Develop a formal mechanism to assess progress made toward DRR and SDGs.
- Define its sectoral responsibilities in accordance with the DRR and SDGs.
- Provide/train dedicated NEMA staff and supporting staff from other ministries.
- Schedule quarterly reviews of SDGs with stakeholders.

SUPPORTS U.N. SENDAI FRAMEWORK

https://www.preventionweb.net/files/44983_sendaiframeworkchart.pdf

Priorities for Action

1, 2, 4

Global Target(s)

B, C, D, E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

U.N. SUSTAINABLE DEVELOPMENT GOALS

https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf

9, 11, 14, 15

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

INSTITUTIONAL ARRANGEMENTS

A6

FINDINGS

As an archipelagic nation, climate change is of significant concern to The Bahamas. The Bahamas Policy for the Adaptation to Climate Change was authored by The National Climate Change Committee and the BEST Commission in 2005. The GoB provided its first Intended Nationally Determined Contribution in November 2015, and ratified the Paris Agreement, on 22 August 2016. To date, the vast majority of the BEST Commission's climate change analysis and input into a CCA Platform has been through independent environmental impact studies before coastal construction for major projects, at the request of other government agencies. While CCA is a recognized need in The Bahamas, the resources have yet to be appropriately applied. The IDB iGOPP Study in 2018 estimated that climate change impacts could cost the Bahamian economy almost $500M annually by 2025 if nothing is done. Thus, in line with the iGOPP 2018 study findings, we recommend the GoB:

RECOMMENDATIONS

- Conduct a baseline CCA to establish metrics to measure progress. It should include a whole of government approach with the involvement of the private sector, NGOs, and all stakeholders down to the community and individual levels.
- Develop a governmental office/ organization tasked with implementing recommendations from the BEST Commission's 2005 report.
- Increase/enforce building codes, especially in coastal zones.
- Increase awareness of potential climate change impacts through education and training programs.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (e), (f), (h), (i)

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 13, 14, 15

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

INSTITUTIONAL ARRANGEMENTS

A7

FINDINGS

The private sector role in DM lacks definition and organization in practice. Several ministries have ad-hoc relationships with private sector organizations for support in disasters, but no formal mechanism exists to track these relationships or determine what capabilities they can provide. Informal relationships are not guaranteed during disasters and are often much more costly. Additionally, fiduciary controls at the national level often prohibit FIAs from acting for fear of committing the GoB to indebtedness.

RECOMMENDATIONS

- Formalize existing relationships and develop Memoranda of Understanding (MOUs)/Memoranda of Agreement (MOAs) detailing potential support and costs – especially on the Family Islands.
- Establish clear processes and standards to become a vendor and/or partner before a major disaster.
- Create and maintain a dynamic roster and inventory of private sector organization capabilities and capacities for support during disaster response and recovery.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 4

Global Target(s)

E, F

Guiding Principle(s)

(a), (b), (d), (e), (f), (h), (i), (k)

U.N. SUSTAINABLE DEVELOPMENT GOALS

TBD

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

INSTITUTIONAL ARRANGEMENTS

A8

FINDINGS

Beginning in 2019, following Hurricane Dorian, NEMA established a mechanism to track NGOs entering the country for the purposes of disaster support. The web-based registration system has been formalized but has limitations. The necessary process and mechanisms to institutionalize the use of the tool has been a struggle. Limited awareness among the NGO community about the processes, requirements, and benefits of participating has led to limited adoption. Additionally, the mechanics of registration are cumbersome for the end-user and can take up to 48 hours to process, potentially impeding life-saving support. It is recommended that the GoB:

RECOMMENDATIONS

- Continue to refine the web-based registration process, mechanisms, and usability of the system.
- Develop the necessary institutional arrangements to engage more actively the NGOs working in the country, including documenting their capabilities, current projects, and locations.
- Work closely with NGOs based in-country and integrate NGOs and capabilities into the DM plans where appropriate.
- Leverage NGOs in a coordinated and targeted fashion to raise disaster awareness and support local projects where applicable.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 4

Global Target(s)

D, E, F

Guiding Principle(s)

(a), (b), (c), (d), (e), (f), (g), (h), (m)

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

THE DMA

ENABLING ENVIRONMENT

ENABLING ENVIRONMENT

Disaster management structures, authorities, processes, and capabilities are enabled by a country's legal, institutional, financial, and social instruments. These rules, laws, policies, and other parameters allow capacities to develop and achieve an effective risk reduction vision. The DMA analyzed the following sub-themes that characterize an enabling environment of The Bahamas: Legal Foundation; Financial Resources; Strategies; Public Confidence and Political Support; and Attitudes and Experiences.

Findings indicate The Bahamas' current disaster management enabling environment has achievements with significant limitations.

While in the recent past The Bahamas' DM legislation was based on reactionary policies emphasizing response, the recent developments have shown The Government of the Bahamas' commitment to disaster risk reduction. This is particularly evident with the creation of a new Office of Disaster Preparedness, Management and Reconstruction in 2022.

The governing law which is still in effect is the DPRA of 2006 which establishes a statutory basis for The Bahamas' national emergency management system and mentions all phases of DM. The DPRA:

- Defines the disaster declaration process and assigns the PM the duty to declare a National Emergency.
- Outlines the organizational structure of NEMA and gives NEMA the authority to operate budgets for all phases of DM.
- Delineates the role of the RBDF in disaster response and its integration into the ESFs.
- Outlines the participation of the Caribbean Community (CARICOM) and CDEMA activities for disaster response through the facilitation of the Ministry of Foreign Affairs (MoFA) and NEMA as the liaison agency.

However, with the new momentum gained from the lessons learned from Hurricane Dorian, there is a need to adjust DPRA to reflect the shift from response-focused policy and legislation to a proactive one and base them on an over-arching strategic vision. There is also a need to address the issue of insufficient funds to meet the expected need, especially in disaster risk reduction and recovery.

The National Development Plan – Vision 2040 brings all phases and goals together in one document with the integration of DRR in national policy as a goal. Still, the overarching nature of the document does little to specifically address gaps in DRR and DRM and as of mid-2020 had not been signed into law.

.

ENABLING ENVIRONMENT

B1

FINDINGS

Two key pieces of legislation govern The Bahamas' disaster management system:

1. The Disaster Preparedness and Response Act (DPRA) (2006) – develops the legal foundation for NEMA formation and assigns NEMA responsibilities for organizing, preparing for, mitigating, responding to, and recovering from emergencies and disasters.

2. The National Disaster Plan and Instructions for Emergency Situations (2018-2020) – updated annually, provides specific actions to address disasters including the use of ESFs, FIAs, and DCCs.

RECOMMENDATIONS

Review and update the DPRA including the current organizational arrangements that reflect the Sendai commitments to comprehensive disaster management; whole of community approach; and the emerging hazard paradigm shaped by the increasing and dire impacts of climate change.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

A, B, C, E

Guiding Principle(s)

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

U.N. SUSTAINABLE DEVELOPMENT GOALS

13

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

ENABLING ENVIRONMENT

B2

FINDINGS

While plans address all phases of emergency management, there is significant emphasis on response and limited focus or direction given to mitigation, preparedness, and recovery.

RECOMMENDATIONS

- Develop appropriate mitigation, preparation, and recovery plans to bring into focus the critical importance of these phase of disaster management and the direct impact of response efforts.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3, 4

Global Target(s)

A, B, C, D, E, G

Guiding Principle(s)

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

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

ENABLING ENVIRONMENT

B3

FINDINGS

Current implementation of plans and any potential for expansion of planning capabilities is severely limited by budget and personnel constraints.

RECOMMENDATIONS

- Evaluate non-traditional planning mechanisms as a cost-effective way of expanding capabilities. (Example: Expand partnerships with international and regional organizations with planning experience in preparing for, mitigating against, and recovering from disasters in archipelago settings. CDEMA, ASEAN AHA Center, Pacific Disaster Center, etc.)
- Begin a budgetary audit to evaluate the application of existing funds to address planning needs more effectively.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3

Global Target(s)

A, B, C, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (i), (j), (k)

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

ENABLING ENVIRONMENT

B4

FINDINGS

There is no legislation requiring DM at lower levels of government. As a result, the disaster management structure at the island level is incomplete. There is no NEMA-like structure outside of Nassau and Grand Bahamas. In a disaster, NEMA provides support and direction to the Island Administrator and his/her staff or consultative committee. The staff may or may not resemble an EOC with an ESF structure. Island Administrators are given the direction to carry out the functions of NEMA, subject to the directions of the NEMA Director. The DCC is comprised of not less than five (5) residents of each settlement or town area, but the duties and qualifications of those residents are not specified. The Administrator and committee(s) are required to submit a draft plan to NEMA reflecting the disaster preparedness measures and responses that are recommended for the island, but this is not consistently done and no mechanism to enable appropriate review and feedback.

RECOMMENDATIONS

- Require island-level DM plans to be updated and submitted regularly (bi-annually is suggested) to NEMA for review, testing and operationalization.
- Formalize and standardize DCC authorities, organizational structures, and minimum capabilities.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 4

Global Target(s)

A, B, C, D

Guiding Principle(s)

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

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

ENABLING ENVIRONMENT

B5

FINDINGS

Budgets are sufficient to address programmatic costs for NEMA but fall significantly short in allowing for expansion of existing programs, establishment of new programs, and disaster relief efforts. The 2021/2022 budget allocates resources for operations and hurricane preparedness below requested levels. Funding for response is accomplished primarily through the Donation Account, which has been significantly reduced following Dorian.

RECOMMENDATIONS

- Provide funding specific to DRM programs and response activities.
- Island Administrators must continue to work closely with the Ministry of Public Works for understanding and prioritization of mitigation projects.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

A, B, C, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (i), (j), (k)

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

ENABLING ENVIRONMENT

B6

FINDINGS

The lack of consistent DRR and DRM programs results in a shortage of funds to execute activities related to those areas.

The current national budget does not provide for capacity development at the community or island level. Any DRM capacity development outside of New Providence is funded and managed by the local government. NEMA does provide technical assistance and advice for any programs but is not responsible for funding. Funds and resources are provided to local governments through parliament and the Minister of Finance, none of which are designated for DRM. However, the Island Administrator and town committees have leeway to use the funds accordingly. We recommend the GoB:

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RECOMMENDATIONS

- Allocate funding and implement a systematic method for program evaluation that allows for ongoing data collection and analysis to monitor policies, projects, and programs designed to support SDG, DRR, and CCA initiatives.
- Provide funding for DRM activities at the Family Island level.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (j), (k), (l)

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 13

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

ENABLING ENVIRONMENT

B7

FINDINGS

There is no budget specifically designated for training and exercises. Training and education funds are not a separate line item in the budget but are paid for using NEMA's operational funds. As an example, FIAs are provided one day of NEMA Training during their pre-assignment training process. In one day, the primary representatives of the government, almost all of whom have no prior emergency or disaster management experience, are introduced to NEMA and the concepts of emergency management. Many recognize that this is insufficient, and training opportunities for FIAs have begun to increase. Additionally, NEMA conducts monthly ESF training, but getting "buy-in" from the other Ministries to support and attend can be challenging. NEMA also receives additional training through programs provided by The Bahamas Red Cross, CDEMA, US Agency for International Development (USAID), US Northern Command, and Pan American Health Organization (PAHO).

RECOMMENDATIONS

- Develop a budget for implementation of an expanded and formal training and exercise program for DM.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (j), (k), (l)

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 13

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

ENABLING ENVIRONMENT

B8

FINDINGS

A dedicated emergency fund exists for The Bahamas. The Donation Account, funded through donations and Parliament, is used for contingencies. The Bahamas has three tropical cyclone policies with the Caribbean Catastrophe Risk Insurance Facility (CCRIF), each covering a section or zone of the archipelago.As of September 26th, 2019, CCRIF paid The Bahamas $12.8M following the passage of Dorian as an activation of the North West Zone CCRIF Policy.DM Reserve fund exists at levels of less than 2% of national annual GDP and has fallen short of needs in the past when emergency appropriations have been passed. While there is no explicit fund, the Donation Account is supported by the government, international donors, and the general public.

RECOMMENDATIONS

- Begin the process of increasing the fund to 2% GDP and increase at least 0.1 percentage point per year to reach at least 3% GDP or more over a 10-year period.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (j), (k), (l)

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 13

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

ENABLING ENVIRONMENT

B9

FINDINGS

While there is not a direct program or facility for the government to provide direct financial support in the form of guarantees or low-interest loans for households or businesses, economic agents may seek support through the Small Business Development Centre, the Office of Disaster Preparedness, Management, and Reconstruction, and the Bahamas Development Bank. The Central Bank of The Bahamas relaxed lending and debt ratio guidelines following Dorian to allow more consumers to apply and qualify for low-interest loans from commercial banks.

RECOMMENDATIONS

- Create and institutionalize low-interest loan programs for households and businesses for DRR and for disaster recovery through the support of commercial banks.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (j), (k), (l)

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 13

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

ENABLING ENVIRONMENT

B10

FINDINGS

Provisions for mitigation programs exist, but requirements are vague or unspecific, and/or enforcement mechanisms do not exist. Sections in the DPRA and the National Disaster Plan specifically outline mitigation as a mission for which NEMA is responsible, but specific actions and enforcement mechanisms are not apparent. The directives discuss mitigation planning, resources, policies, and activities to meet the objectives of The Bahamas. The DPRA directs that the National Preparedness and Response Plan include procedures for all offices, ministries, and organizations involved in mitigation efforts.The National Disaster Plan further specifies actions and initiatives that organizations are to take and parallels The Bahamas' efforts with those of CDEMA.

RECOMMENDATIONS

- Update the DPRA and its supporting legislation including more detailed provisions for disaster mitigation underlying its role NEMA as the lead agency responsible for mitigation policies including training and education and Ministry of Public Works role as the enforcement and implementing agency for building codes.
- Revisit The Bahamas Building Code and make the necessary enhancements through lessons learned from Dorian.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 4

Global Target(s)

E

Guiding Principle(s)

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

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 14, 15

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

ENABLING ENVIRONMENT

B11

FINDINGS

There is no consideration of gender or vulnerable groups in strategies and policies, and the DPRA does not mention gender or vulnerable groups. The National Disaster Plan only includes these as part of more extensive regional plans, such as CDEMA's Regional Comprehensive Disaster Management Plan and the Organization of Eastern Caribbean States' St George's Declaration of Principles for Environmental Suitability. The Evacuation Plan for The Bahamas addresses vulnerable groups, including women and children, aged, infirmed, disabilities, and other groups.

RECOMMENDATIONS

- Address gender and vulnerable groups in national and local plans.
- Integrate the data related to household composition generated through PDC's Risk and Vulnerability Analysis (RVA) into The Bahamas planning efforts at all levels of government.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (i)

U.N. SUSTAINABLE DEVELOPMENT GOALS

5

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

ENABLING ENVIRONMENT

B12

FINDINGS

Public confidence in DM and DRR entities has not been assessed and is not tracked within The Bahamas. While some media reports cited frustration with the speed of government response following Hurricane Dorian, it was not unexpected given the severity of the disaster. Political approval ratings are not collected.

Public engagement in DM efforts is not at the desired levels. We recommend the GoB:

RECOMMENDATIONS

- Provide a structured and neutral way for the public to share their sentiments on disaster management operations.
- Continue current public education efforts in schools, social media, and national media.
- Expand the Community Emergency Response Team training (CERT).
- Conduct household surveys with the help of volunteer organizations (example: Red Cross) to assess preparedness levels.
- Explore non-traditional disaster management and public outreach campaigns using social media and partnerships with private industry.

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SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

E

Guiding Principle(s)

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

U.N. SUSTAINABLE DEVELOPMENT GOALS

9, 11, 14, 15

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

THE DMA

DISASTER GOVERNANCE MECHANISMS

DISASTER GOVERNANCE MECHANISMS

Disaster management efforts are most effective when guided by standard, 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 The Bahamas: plans and standard operating procedures; command, control, and coordination systems; emergency operations centers.

The Bahamas' current disaster governance mechanisms have clear achievements with significant limitations.

At the National level, The Bahamas has strong command, control, and coordination mechanisms. However, the well-organized and clearly defined roles at the national level have not been appropriately sized and/or replicated for Family Islands. Significant progress has been made over the last several years to streamline and improve disaster response operations. Guided by NEMA's National Disaster Plan and Instructions for Emergency Operations, functional areas are well established and tested. It was also noted that the Emergency Support Function (ESF) structure currently in place allows for solid coordination across government ministries and was well understood.

A limiting factor to reaching advanced capacity in the area of Disaster Governance Mechanisms is related to significant planning gaps. Currently, not all critical sectors have emergency plans. Where they do exist, they lack adequate connection with the National Disaster Plan and ESF structure. Despite a strong attempt by the government to ensure public availability of planning documents those found on government websites were found to be outdated or earlier draft versions of what was being operationalized and a reluctance by individuals to share.

Good communications are available, but procedures need to be enforced. Synergy between plans is not common. In most cases, mutual aid agreements are not formalized. The DPRA directs that the Officer in Charge (OIC) of the RBPF maintain mutual assistance agreements with industry to rely on equipment, supplies, and expertise in the event of an emergency. Still, there is no formal mechanism in place. The DPRA and National Disaster Plan both provide guidance on the use of international assistance. While NEMA policies identify the coordination efforts of organizations like The Bahamas Red Cross, USAID, and CDEMA, NEMA does not impose/provide any standards, requirements, or planning guidance to these organizations.

Disaster governance of The Bahamas can be brought to advanced capacity by updating and formalizing the standard operating procedures; standardization and strengthening of the command, control, and coordination systems through (a) instilling ICS structure across all island EOCs and (b) by equipping all of the Family Island EOCs with the state-of-the-art information and communication technologies to maintain a solid common operating picture across all disaster management stakeholders; and by hiring, training, and credentialling the required personnel to overcome staffing shortages.

DISASTER GOVERNANCE MECHANISMS

C1

FINDINGS

Disaster governance mechanisms outside of Nassau and Grand Bahama lack structure. The Family Islands need tailored approaches for their specific emergency management needs while also acknowledging the challenges of limited resources and budget.

RECOMMENDATIONS

- Provide more specific guidance and oversight to the Family Islands through NEMA.
- Refine the policy guidance to establish clarity and realistic expectations on the structure and minimum requirements for disaster management offices on the Family Islands.
- Review non-traditional approaches to supporting Family Island disaster management capacity and capability.
- Explore/leverage established regional island groupings to prevent a one size fits all approach.
- Establish policy to help 'right size' the disaster management structure of The Family Islands.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f), (i), (j)

U.N. SUSTAINABLE DEVELOPMENT GOALS

11, 13, 15

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

DISASTER GOVERNANCE MECHANISMS

C2

FINDINGS

Volunteers and government surge staff are a way to address human resource limitations and advance capacity and capability. However, to be successful volunteers need to be effectively managed and directed by NEMA to support priority efforts. Currently, the management of volunteers is done ad-hoc through ESF. For effective integration of volunteers into the NEMA framework, a formalized process is required.

Skilled professional surge staff, similar to how NEMA engages with OPM for support is another great way to meet short-term staffing needs during a response operation. Just like volunteers, appropriate training, direction, and oversight is required. NEMA has successfully requested and received additional staff from RBDF for EOC duties, however, while those staff members are often eager to support operations they are not always trained or equipped properly. We recommend the GoB:

RECOMMENDATIONS

- Develop a clear mechanism for indexing in surge capacity from volunteer organizations and government ministries provisioning clear expectations for support and assurance that resources are appropriately trained for the job they are being asked to perform.
- Establish a formalized process for working with volunteer organizations. Work with established volunteer partners to develop surge staff onboarding protocols. Provide clear direction and guidance with useful and appropriate training in advance, that are well matched (skill sets and passion are adequately aligned) and ensure a process for recognition of volunteers and their contributions.
- Make training available in multiple formats (in person and web-based) to ensure that during times of disaster when staffing is needed, virtual training can be mastered.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f), (i)

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

DISASTER GOVERNANCE MECHANISMS

C3

FINDINGS

The National Emergency Management Advisory Committee can request additional disaster planning efforts or provide additional planning guidance. However, currently there are no requirements or guidance for the broader national or international DM stakeholder community. While NEMA and NEMA policies identify the primary coordination mechanism to interface with organizations like The Bahamas Red Cross, USAID, and CDEMA; NEMA does not impose any requirements or provide any planning guidance.

RECOMMENDATIONS

- A review and update of existing coordination mechanisms with national and international partners should happen annually.
- The coordination mechanisms need to be well documented and effectively tested during exercises.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E, F

Guiding Principle(s)

(a), (b), (d), (e), (f), (l), (m)

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

DISASTER GOVERNANCE MECHANISMS

C4

FINDINGS

There is a need for formalized agreements across islands to give and receive aid during emergencies outside actual national disaster declarations. Currently, there are no official mutual aid agreements between and among islands.

RECOMMENDATIONS

- Establish emergency management assistance mutual aid agreements (or emergency management assistance compacts) through Memoranda of Understanding (MOU) between neighboring Family Islands to send or receive aid in the form of human, equipment, material, or technical resources between and across neighboring islands.
- Formalize the Family Island MOUs and review annually.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f)

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

DISASTER GOVERNANCE MECHANISMS

C5

FINDINGS

Currently, mutual aid agreements exist at the island level but are informal, often unwritten, and/or unsigned. The DPRA directs that the OIC of the RBPF maintain mutual aid and assistance agreements with industry to support emergency equipment, supplies, and expertise. However, currently there are no formal mechanisms to support the institutionalization. The DPRA also dictates that the Director of NEMA, within the National Disaster Plan, have the necessary procedures to apply if private property is necessary in the event of a disaster, including procedures for assessing and compensating. The National Disaster Plan directs the leads of several ESFs (Ministry of Public Works, Department of Social Services, NEMA) to execute MOUs with government and private entities as necessary for disaster response. Formal agreements, however, do not exist, and these are done on an event-by-event basis.

RECOMMENDATIONS

- Formalize MOUs/MOAs between the government and the private sector/ NGO partners for emergency aid assistance and review annually.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f)

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

DISASTER GOVERNANCE MECHANISMS

C6

FINDINGS

A well-functioning National Emergency Operations Center (NEOC) requires the appropriate mechanisms, procedures, and staff to function during disaster operations. This includes clear command and control structures, coordination mechanisms, and well-trained staff. Currently, the Incident Command Structures and Systems (ICS) are functioning, but a lack of governing mechanisms is creating significant challenges with full operationalization. For example, ESF staffing is insufficient for prolonged operations and NEOC managers are asked to perform duties with limited knowledge and/or training.

RECOMMENDATIONS

- Formalize ICS at the national and island level to include clarity on roles and responsibilities and expanded training opportunities.
- Explore options to increase ESF staffing levels to ensure necessary support for prolonged operations.
- Establish a three-year path to increasing permanent full-time staffing at NEMA to reduce the reliance on outside ministries to perform NEOC management duties.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f)

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

DISASTER GOVERNANCE MECHANISMS

C7

FINDINGS

Family Island EOCs are often overlooked or secondary to discussions about the NEOC. However, Family Island operations must be prioritized if a successful response is to be realized for The Bahamas. Disaster operations across an archipelago have unique logistics challenges. A well-functioning decentralized disaster management structure is needed – this includes operations centers.

Official backup EOCs have not been formally identified, equipped, or tested in the Family Islands or at the National Level. An informal discussion did reveal options at the national level, to support surge capacity. As an example, the National Training Center in Nassau, used to house NGOs during response to Dorian, worked well. However, the facility could not serve as a secondary EOC should the first be compromised – noting that if the NEOC is impacted it is most likely the National Training Center would also be affected.

RECOMMENDATIONS

- Ensure strong decentralized disaster management mechanisms are in place to address the unique needs of The Bahamas
- Ensure that Secondary NEOC and Family Island EOCs are formally identified, configured, and fully tested/exercised.

Photos: Central Abaco (top) and North Abaco (bottom) Field Coordination Centers. Source: B. Milliken, Pacific Disaster Center (2019)

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (d), (e), (f)

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

DISASTER GOVERNANCE MECHANISMS

C8

FINDINGS

Family Island field-level coordination centers exist on each island. They are maintained by FIAs, acting as NEMA representatives, but often lack the proper staffing and equipping. For small islands with limited facilities, a dual-use location might be ideal. Each FIA is responsible for providing communications equipment for whichever facilities to serve as a field-level coordination center. For example, in Central Abaco, the conference room in the primary government building in Marsh Harbour is identified as the coordination center. In North Abaco, a public library is the identified site. Both are outfitted with radio communications and satellite phones.

RECOMMENDATIONS

- Ensure field-level location centers are pre-identified and communicated widely as part of the planning process.
- Equip field-level coordination centers with updated communication and necessary equipment.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (e), (f)

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

DISASTER GOVERNANCE MECHANISMS

C9

FINDINGS

NEMA identified that a more formal training and credentialing mechanism was required for individuals. The process of conceptualizing and formalizing minimum credentialing requirements is currently underway. Not only is NEMA looking to create requirements for nationals but also supporting the indexing in of regional and international experts during disasters. The credentialing structure and process are similar to an approach used by the Ministry of Health, which facilitates the integration of international experts while still ensuring minimum standards of service delivery can be met.

RECOMMENDATIONS

- Complete the development and institutionalization of the responder credentialing program.
- Develop the mechanisms to allow for the international community across sectors to support response operations during times of disasters.
- Develop and integrate plans and policies to ensure that a formalized process with clear guidelines and paths to success. It is encouraged that various stakeholders from diverse backgrounds; NGOs, private companies, and universities are part of the process.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E, F

Guiding Principle(s)

(a), (b), (d), (e), (f), (l), (m)

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

DISASTER GOVERNANCE MECHANISMS

C10

FINDINGS

Family Island field-level coordination centers exist on each island. They are maintained by FIAs, acting as NEMA representatives, but often lack the proper staffing and equipping. For small islands with limited facilities, a dual-use location might be ideal. Each FIA is responsible for providing communications equipment for whichever facilities to serve as a field-level coordination center. For example, in Central Abaco, the conference room in the primary government building in Marsh Harbour is identified as the coordination center. In North Abaco, a public library is the identified site. Both are outfitted with radio communications and satellite phones.

RECOMMENDATIONS

- Establish the necessary policy guidance and minimum requirements for COOP and COG plans.
- Develop COOP/COG plans for NEMA, the GOB, and supporting ministries. Develop COOP/COG plans to support the Family Islands.
- Coordinate, train, and exercise COOP/COG plans.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3, 4

Global Target(s)

E

Guiding Principle(s)

(a), (b), (e), (f)

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

THE DMA

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

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 Bahamas' overall capabilities and resources. The DMA examines these sub-themes which include the source and size of surge capacities available in times of disaster, and a broad array of disaster-focused functional capabilities like search and rescue, sanitation, and security. For this analysis, the following core thematic areas were reviewed: Dedicated Facilities and Equipment; Human Resources; Inventory of Commodities and Supplies; Targeted Functional Capabilities.

The Bahamas' current disaster management capabilities and resources have clear achievements with significant limitations.

In many areas, The Bahamas is doing well. Dedicated facilities and equipment at the national level have been identified and are integrated into operations. Targeted functional capabilities, such as WASH and HAZMAT are expanding and on a path to adequately support operations. While funding is the main inhibitor for the acquisition and maintenance of a strong inventory of commodities and supplies, with support from CDEMA and USNORTHCOM these mechanisms continue to improve.

An area for much-needed improvement is human resources at all levels of government. The DMA analysis showed that front-line disaster response resources, including staff, facilities, and equipment, are sufficient on New Providence and Grand Bahama. There remain significant gaps in well-trained staff and resources in the family islands. The lack of sufficient fire suppression capabilities is an example of a needed improvement for the family islands. Currently, fire stations are only located on the larger islands, with a general shortage of stations and firefighters, leaving vast areas of the country underserved.

The government mechanisms through the DPRA are well established and require Permanent Secretaries and heads of departments to render necessary support to the NEMA Director, including staffing as needed. Hence, support staff is drawn primarily from the ministries and the Office of the Prime Minister (OPM). This is sufficient to augment gaps in the capital but not an effective approach to support the Family Islands and has resulted in untrained personnel supporting core operations. Efforts to improve capacity through supplemental/surge staffing from New Providence to the family islands have had limited success. During major response operations like Dorian, volunteer support did help to augment operations however, the lack of formal process and clear guidelines has limited the meaningful integration of volunteers into operations.

CAPABILITIES AND RESOURCES

Warehouses are key, especially when we consider logistical challenges associated with disaster response in an archipelago. For this reason, as part of the NDPBA RVA, distance to warehouse was considered when evaluating logistics capacity for each island. There are three purpose-built warehouses strategically located throughout The Bahamas and are well-run and stocked by the DCCs and full-time supply officers. With a need to improve the timely delivery of disaster supplies to impacted islands, additional warehouses are needed to support effective disaster response countrywide and reach advanced capacity.

Shelter planning is important, especially considering a mass influx of evacuees from neighboring islands, as was observed during Dorian. In the Bahamas, the Department of Social Services (DSS) Disaster Management Unit (DMU) is responsible for identifying and compiling shelter locations, often dual-use facilities, as a pre-hurricane season measure. DSS has done a quality job in supporting this requirement, but further consideration needs to be given to strategic positioning, cost effectiveness, suitability, minimum required levels of mass care support, and further open distribution of the information to help with public preparedness.

While formal partnerships and arrangements exist with regional and international organizations such as CDEMA, CARICOM, World Health Organization (WHO), and World Food Programme (WFP), often, ad-hoc arrangements are entered into to secure supplemental disaster management resources.

Targeted Functional Capability in The Bahamas is solid but areas in need of attention are processes, procedures, and plans for evacuation. The Ministry of Health (MoH) is well integrated into the national response and serves as the Lead for Health and Medical Services at the NEOC. The urgency for addressing limited evacuation capability is the clearly identified increase in evacuation likelihood as a result of climate change. Detailed evacuation plans are necessary and must adequately address evacuations from all islands, to including New Providence.

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

D1

FINDINGS

Dedicated facilities and equipment are needed, and in many cases shared resources are insufficient. Fire protection and fire suppression are key areas where dedicated facilities are required. With fire stations on only the larger islands, there is a general shortage of stations and firefighters, leaving vast areas underserved. The NDPBA RVA analysis shows that 12% of the Bahamas population is exposed to wildfires and with climate change that will increase. Structure fires can impact 100% of the population and appropriate support is needed. Firefighters are part of the RBPF-Fire Service but are not exclusively dedicated to firefighting activities. There are 64 trained firefighters in New Providence and 19 trained firefighters in Grand Bahama. Abaco, Exuma, Eleuthera, Acklins, and Inagua have volunteer firefighters led by an RBPF representative. We recommend the GoB:

RECOMMENDATIONS

- Leverage the NDPBA to prioritize firefighting equipment and training. Implement a plan over 36 months to increase the number of firefighters and develop a cadre of personnel whose primary job is firefighting.
- Ensure trained firefighters are stationed and available on each island.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3

Global Target(s)

A, B, E

Guiding Principle(s)

(a), (b), (c), (f)

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

CAPABILITIES AND RESOURCES

CAPABILITIES AND RESOURCES

D2

FINDINGS

Dedicated and well-trained human resources are vital for effective disaster management. Without it, advanced disaster management capacity cannot be reached. NEMA has recently invested in their staff bringing on needed team members for planning and preparedness efforts. Through the Disaster Management Advisory Committee and direction of the NEMA Director, ESF Leads meet monthly to advance disaster planning. Members of the ESF and Advisory Committee all form subject matter experts from multiple sectors to index into the planning process or support program management through consensus building. At the island level, disaster planning is performed by the DCC. Family Island Administrators also play a vital role in ensuring that disaster preparedness plans for their island are drafted, tested, and shared. Despite progress and demonstrated commitment by NEMA to meet the demand, the decentralized nature of The Bahamas and the current approach still leaves the nation insufficiently staffed to complete the necessary planning to meet Sendai Framework DRR, CCA, and SDG goals. We recommend the GoB:

RECOMMENDATIONS

- Increase NEMA staffing to allow for dedicated planning staff. Consider dedicated annual surge capacity or partnership with organizations specializing in planning to assist in creating the foundation to meet the minimum planning guidelines.
- Provide dedicated support through NEMA staff, contractors, or partnerships to meaningfully support FIA/DCC planning efforts.
- Invest in existing human resources to ensure skill sets are appropriately matched with the challenges of today and into the future. Ensure that training and investment in human resources are also made available to the FIAs and DCCs.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E, F

Guiding Principle(s)

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

U.N. SUSTAINABLE DEVELOPMENT GOALS

11, 13, 15

PARIS AGREEMENT ARTICLES

7.1, 8.1

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

CAPABILITIES AND RESOURCES

D3

FINDINGS

Volunteers and government surge staff are a way to address human resource limitations and advance capacity and capability. However, to be successful volunteers need to be effectively managed and directed by NEMA to support priority efforts. Currently, the management of volunteers is done ad-hoc through ESF. For effective integration of volunteers into the NEMA framework, a formalized process is required.

Skilled professional surge staff, similar to how NEMA engages with OPM for support is another great way to meet short-term staffing needs during a response operation. Just like volunteers, appropriate training, direction, and oversight is required. NEMA has successfully requested and received additional staff from RBDF for EOC duties, however, while those staff members are often eager to support operations they are not always trained or equipped properly. We recommend the GoB:

RECOMMENDATIONS

- Develop a clear mechanism for indexing in surge capacity from volunteer organizations and government ministries provisioning clear expectations for support and assurance that resources are appropriately trained for the job they are being asked to perform.
- Establish a formalized process for working with volunteer organizations. Work with established volunteer partners to develop surge staff onboarding protocols. Provide clear direction and guidance with useful and appropriate training in advance, that are well matched (skill sets and passion are adequately aligned) and ensure a process for recognition of volunteers and their contributions.
- Make training available in multiple formats (in person and web-based) to ensure that during times of disaster when staffing is needed, virtual training can be mastered.

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SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3

Global Target(s)

E

Guiding Principle(s)

(a), (b), (e), (d), (e), (f), (h)

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

CAPABILITIES AND RESOURCES

D4

FINDINGS

Shelter lists are compiled every year by the DSS-DMU as a pre-hurricane season measure. However, additional surge capacity or secondary shelter locations are often needed prior to a major event. This requires that DSS identify, evaluate and resource appropriately before a significant tropical cyclone makes landfall. Most shelters are dual-use facilities which is an excellent way to ensure building/facility maintenance with churches, community centers, and gymnasiums being used. As observed during Hurricane Dorian, shelter challenges are made more complex when an island (or multiple islands) is evacuated, and persons need to be sheltered on a neighboring island. A process for host islands to effectively shelter and provide mass care to evacuees is vital. New Providence is best equipped to manage the influx of evacuees, however that is not always feasible or cost effective. Consideration and planning must be given should evacuations need to occur on New Providence. We recommend the GoB:

RECOMMENDATIONS

- Leverage the findings of the NDPBA Analysis to prioritize islands for expanded shelter identification and evacuation planning.
- Develop sheltering plans that include evacuation of neighboring islands and the roles and responsibilities of a host island. This should include minimum levels of mass care support needed. Develop a plan to address the evacuation and sheltering of New Providence residents among the family islands.

  Ensure shelter suitability assessments are completed, documented, and widely distributed.
- Develop shelter plans that address populations with special needs and consider shelter operations during a pandemic when enhanced protocols will be required.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

2, 3

Global Target(s)

E

Guiding Principle(s)

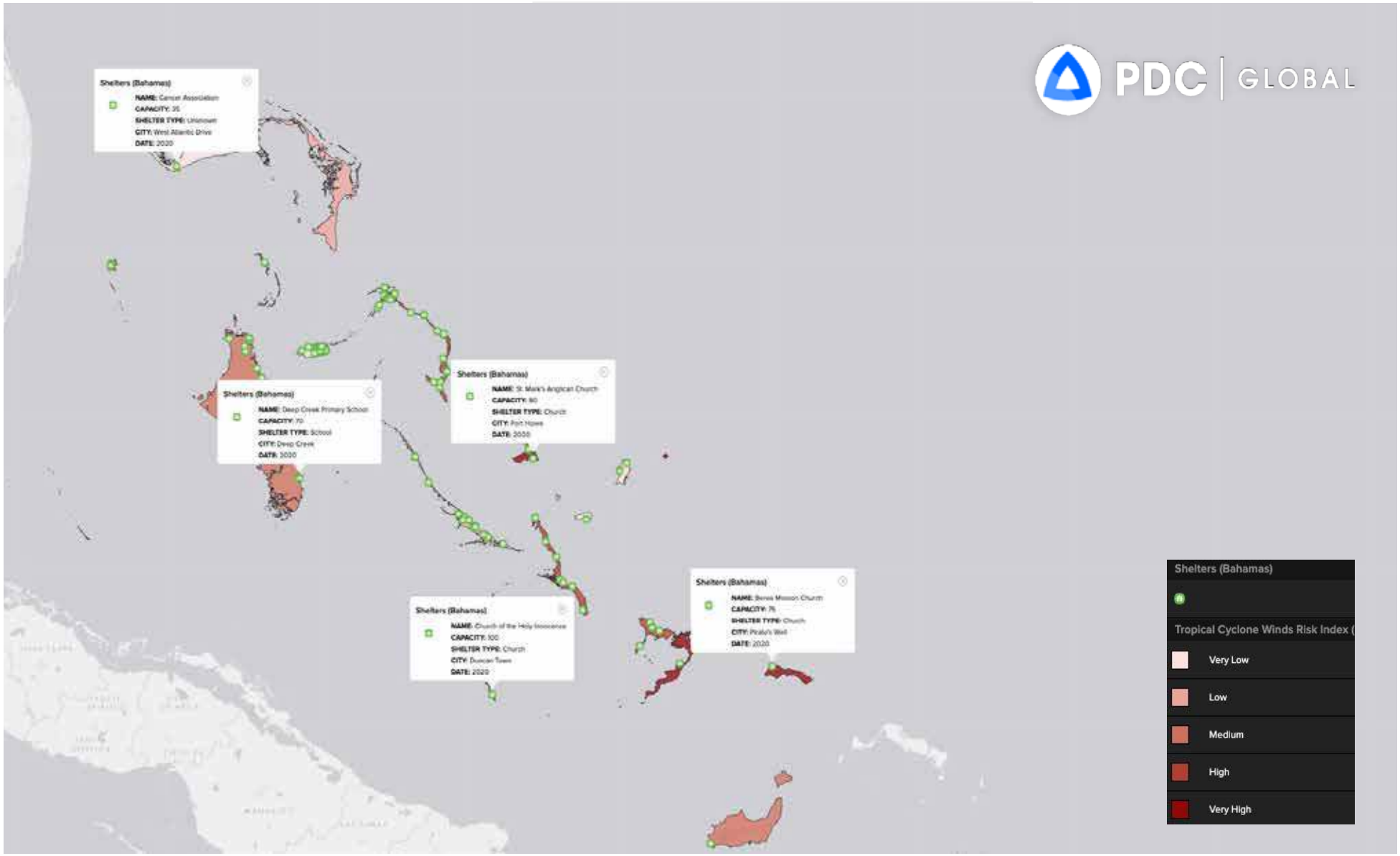
(a), (b), (d), (e), (f)

U.N. SUSTAINABLE DEVELOPMENT GOALS

5

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

CAPABILITIES AND RESOURCES



CAPABILITIES AND RESOURCES

D5

FINDINGS

NEMA maintains three disaster warehouses, as shown in the image below (DisasterAWARE Pro, 2021), New Providence, Grand Bahama, Great Inagua. The warehouses in Freeport and New Providence contain the bulk of the materials and supplies. The warehouses provide geographic dispersal (one each in the northern, central, and southern islands). Despite the decentralized location of the warehouses, the logistics are managed and controlled by NEMA. The warehouses lack the necessary equipment, material, and human resources to function as required to reach advanced capacity. Essential and lifesaving commodities and supplies are not available on all islands. Funding is the main driver of the lack of commodities and supplies. NEMA is responsible for transporting supplies to affected islands, but island personnel or other assigned representatives are responsible for distribution from the receiving point. NEMA relies heavily on donations to maintain disaster stockpiles at the three warehouses. During the response to Dorian, needs quickly and significantly surpassed available equipment and resources.

RECOMMENDATIONS

- Leveraging the NDPBA logistics capacity and distance to warehouse assessment, identify a phased approach to increasing capacity across the archipelago.
- Leveraging the findings from the NDPBA logistics capacity and distance to warehouse assessment, determine the best locations to reduce the burden to the family islands. Having a warehouse on every island or in each region is not feasible, yet a plan to reduce the distance and time taken to deliver aid can effectively be achieved if a data-driven approach is used.
- Construct smaller, storm-resistant structures on each island to support immediate needs immediately after a disaster and support receipt, staging, and distribution of post-event supplies.
  Evaluate the feasibility of building appropriately scaled multi-use facilities that can serve as EOC, community centers, shelters, and warehouses.
- Develop plans and procedures to ensure that once aid is delivered from a warehouse to a staging area, the appropriate mechanisms for distribution on island are in place.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

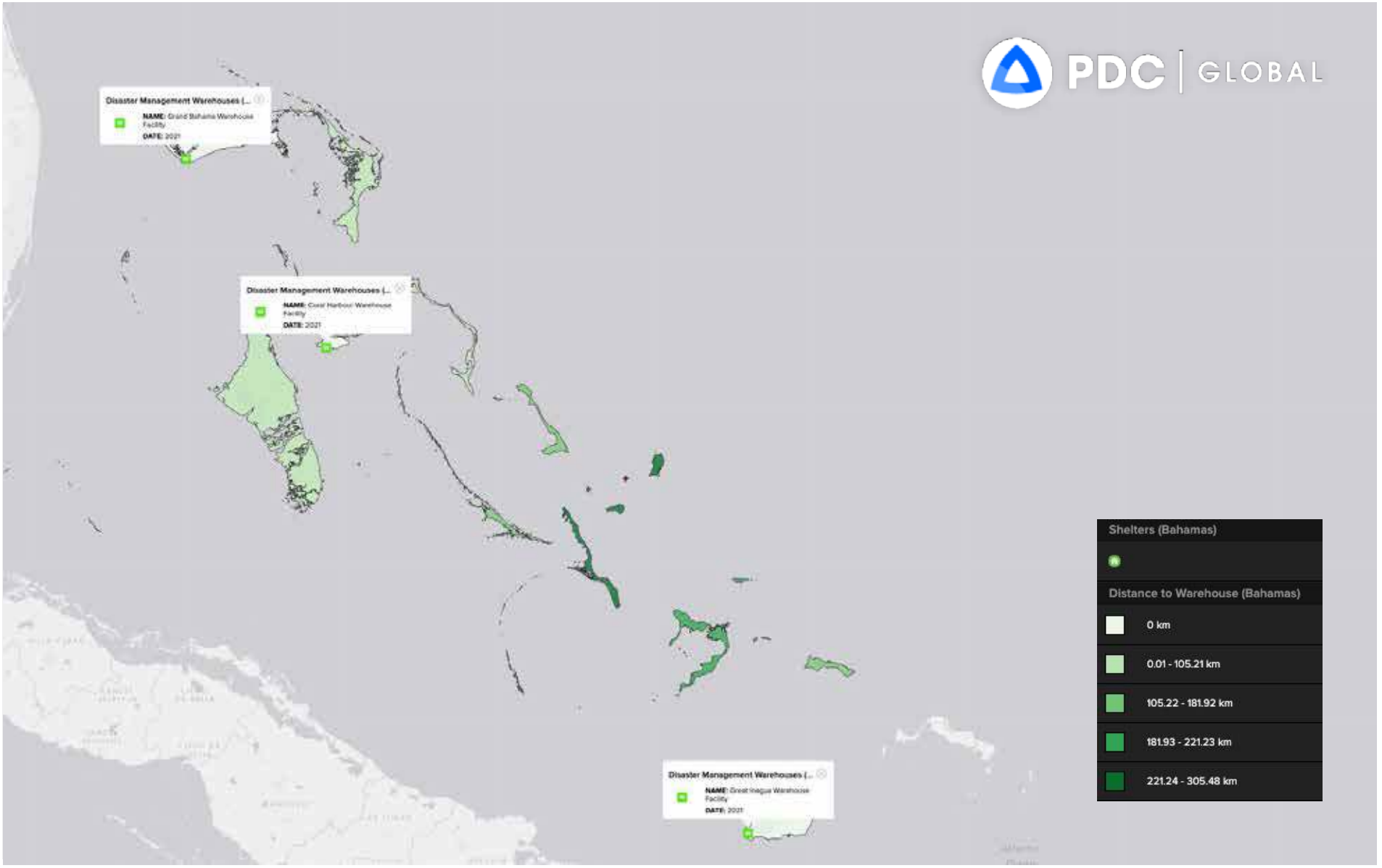
D, E

Guiding Principle(s)

(a), (b), (c), (d), (e), (f), (g), (h), (j)

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

CAPABILITIES AND RESOURCES



CAPABILITIES AND RESOURCES

D6

FINDINGS

Capabilities and resources will always be a challenge when addressing disaster management for an archipelago. Non-traditional approaches and FIA-driven solutions need to be considered when an island's capabilities are overwhelmed. Currently, NEMA is responsible for response and resourcing, but expanded ownership is needed if advanced capacity is to be reached. We recommend the GoB:

RECOMMENDATIONS

- Develop plans for inter-island support. This can be in the form of "fly-away" teams trained and resourced by NEMA to support affected islands in the immediate aftermath of a disaster.
- Hold annual FIA Solution Seminars to explore non-traditional approaches to solving the unique disaster management challenges of The Bahamas.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E, F

Guiding Principle(s)

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

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

THE DMA

CAPACITY DEVELOPMENT

CAPACITY DEVELOPMENT

The ability of The Bahamas to advance disaster management strategies that achieve risk reduction and resilience goals is ultimately dependent on its ability to support capacity development. From training and education that supports the advancement of knowledge and skills to the institutionalization of appropriate attitudes and cultures, capacity development requires the continuous advancement of assessments, strategic plans, programs, facilities, and many other sub-themes. The DMA analyzes these sub-themes, looking at resources and opportunities for all stakeholders and all sectors, from individuals and special-needs groups to government responders. Sub-themes examined include Capacity Development Plans and Strategies; Training and Education Programs and Facilities; Monitoring and Evaluation Processes and Systems; and After-Action Reporting.

The Bahamas' current disaster management capacity development has significant limitations.

Capacity Development is one area where The Bahamas will need to make significant and focused investments to see improvement towards advanced capacity. There is a lack of capacity development plans and strategies, limited training and education programs and facilities, no formal certification program, and no capacity monitoring and evaluation process/system currently in place.

Currently, the main impetus for annual training and exercises is the identified needs during the most recent disaster and usually comes at a request from the Prime Minister as was the case for the Restoration Cays Exercises. Building on the momentum of those annual exercises supported and scheduled by the USNORTHCOM, The Bahamas needs to build its own capacity and capability with a national exercise program under NEMA which should include technical and material support for FIAs to conduct their own exercises and integrate them into the national preparedness plans. The national training and exercise program must have a dedicated budget, staff, facilities, and materials.

To build advanced capacity in The Bahamas, the national training and exercise program should (a) incorporate competency-based position requirements for DM positions to include NEMA, ESFs, and FIA staff to the training curriculum; (b) seek participation from all relevant stakeholders including the concerned ministries, agencies, as well as the academic (particularly the University of The Bahamas), private sector and NGO partners; (c) leverage the existing regional partnerships for additional resource; technical expertise; and situational readiness; (d) continue the good practice of conducting comprehensive acter-action reviews; and (e) mandate policy and plan reviews/updates.

CAPACITY DEVELOPMENT

E1

FINDINGS

Disaster Management capacity development (CD) is ad-hoc, primarily through existing training from international partners (USNORTHCOM/USAID/OFDA/CDEMA). There is no resident CD done at NEMA or within the government. Individual ESF leads are responsible for training their staff, but there is no tracking. NEMA lacks a comprehensive DM training curriculum. Training is carried out but is usually scheduled and completed based on immediate needs or lessons learned and not the result of a formalized training plan.

RECOMMENDATIONS

- Develop a long-term (3-year) DM training plan.
- Develop and maintain approved training and curriculum that can be used as references for new personnel or refreshers.
- Develop a set training program for NEMA personnel, both at onboarding and during their tenure.
- Develop training curriculum for NEOC personnel, including ESFS, FIAs, and DCCs.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (h), (j)

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

CAPACITY DEVELOPMENT

E2

FINDINGS

Minimum training and exercise requirements do not currently exist. Although training and exercises occur, they are not the result of a macro-training or exercise plan or program. A request from the Prime Minister for an annual national exercise is currently the driving force behind activities. Training and exercises are most often a result of identified needs during the most recent disaster, as was the case for the Restoration Island Cays Exercises in 2019 and 2020. The only annual scheduled exercises are those supported and scheduled by USNORTHCOM. A structured yearly exercise schedule should include all levels of exercises (discussion- and operations-based). They should facilitate a review of all applicable plans, incorporate lessons learned from previous exercises or responses, and be projected out for at least three years.

RECOMMENDATIONS

- Update policy to establish a formal national exercise program under NEMA.
- Establish the necessary budget and dedicated resources to successfully implement an exercise program.
- Create a long-term exercise plan that is coordinated with national planning efforts. Develop an internal capability to design and execute exercises.
- Conduct quarterly tabletop exercises to evaluate plans and training.
- Conduct an annual National Level Exercise involving all ministries, FIAs, ESFs, DCCs, and government leadership.
- Develop and support island-level exercise planning and execution capabilities. Maintain electronic training and exercise records.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (h), (j)

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

CAPACITY DEVELOPMENT

E3

FINDINGS

Exercise evaluation standards do not exist. Currently, the only major exercise conducted by NEMA is completed with the support of USNORTHCOM and the Pacific Disaster Center (PDC), and evaluation standards are created and monitored by the supporting agencies.

RECOMMENDATIONS

- As an internal exercise program is created, develop evaluation standards based on laws, plans, policies, etc.
- Train personnel on how to properly evaluate exercises.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E4

FINDINGS

NEMA provides the family islands with technical or advisory support for exercises but not financial or material support. If FIAs were to conduct exercises, NEMA would provide subject matter expertise (SME) technical and advisory support. However, it does not have a budget to support beyond that. For that reason, there are no scheduled or consistent exercises conducted by the family islands.

RECOMMENDATIONS

- Develop a FI exercise plan.
- Create a budget for FI exercises and support.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E5

FINDINGS

Not all agencies are required to participate in exercises. While NEMA encourages participation by ESF leads and other government representatives, there is no requirement, and daily jobs often inhibit involvement from outside agencies. NGO and private sector stakeholders are invited to participate in training and exercises. While not all participate all the time, there are instances where NGOs and the private sector have experienced. Some local and international NGOs participated in the RIC exercises.

RECOMMENDATIONS

- Create and enforce the requirement for exercise participation by NEOC staff.
- Increase NGO and private sector participation in training and exercises.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E6

FINDINGS

NEMA has recently begun the development of competency-based position requirements. However, they have not yet been implemented. Competency requirements are currently not position-specific but rather ESF-specific. Each "Position" is not inherently tied to any agency or ESF, but the National Disaster Plan and Instruction for Emergency Situations outlines requirements for specific ESFs.

RECOMMENDATIONS

- Continue the development of competency requirements and implement them.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E7

FINDINGS

Higher education supporting DM professionalization does exist but is not formally organized and/or does not support professionalization through the hosting of symposia on DM-related topics. The University of The Bahamas (UB) offers several undergraduate and graduate programs which focus on sustainability and environmental management. In the scope of these programs, disaster management is addressed as a function of sustainability's impact on environmental issues, but not as a standalone disaster management program. While there are no complete DM degrees, The UB, with support from its Small Island Sustainability Research Center, offers multiple undergraduate and graduate programs which incorporate emergency and disaster management principles as a function of sustainability. Courses on environmental protection, building design, codes, public administration, policy development, urban/rural planning, and conservation all have a basis in DM.

RECOMMENDATIONS

- Work with UB and/or the University of the West Indies to develop a formalized DM degree. Start at the certificate level and work towards higher academic degrees.
- Establish an internship path to help professionalize the field and build the next generation of disaster management professionals.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E8

FINDINGS

Post-disaster review and evaluation of disaster response efforts typically occurs but is not required. While comprehensive after-action reports are conducted and usually include a significant representation of government, private, and NGO community stakeholders, post-disaster reviews of plans, policies, and procedures are not mandated by legislation and are typically coordinated in an ad-hoc fashion.

RECOMMENDATIONS

- Include in legislation or disaster plans the requirement for After Action Reports (AARs) following response operations, training, and exercises.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E9

FINDINGS

Evaluation of drills and exercises occurs but is not formally linked to plan and SOP revision processes. The outputs and lessons learned from drills are incorporated into NEMA's operational practices. Still, such incorporation is not a listed requirement of DPRA or the National Disaster Plan and Instructions for Emergency Situations. As an example, a situational awareness exercise conducted with NEMA and ESF Leads was incorporated into the operational use of NEMA's Daily Situation Report during the responses to Hurricane Dorian and COVID-19 but is not currently a requirement in a plan or SOP.

RECOMMENDATIONS

- Incorporate plan revision requirements into legislation and current plans and ensure exercise and response evaluations are part of that process.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

CAPACITY DEVELOPMENT

E10

FINDINGS

DM legislation has not been reviewed or updated, even after past major disasters. The DPRA has not been updated since it was signed into law in 2006. Since the implementation of the DPRA, numerous significant disasters have occurred in The Bahamas that have precipitated substantial changes in NEMA's response operations. Updates to policies and plans are typically located in updates to the National Disaster Plan and Instruction for Emergency Situations and not the overarching legislation.

RECOMMENDATIONS

- Incorporate the changes in NEMA's disaster response operating principles into the new version of DM legislation as well as into the revisions to the response plans.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h)

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

THE DMA

COMMUNICATION AND INFORMATION

COMMUNICATION AND INFORMATION

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 The Bahamas to inform pre-and post-disaster activities. From hazard mapping to event monitoring, to warning and notification, communication and information management.

The Bahamas' achievements in communication and information management have clear achievements with significant limitations.

CURRENT STATUS

The Bahamas has a good system in place to track its own hazards. The Department of Meteorology (Met Dept) tracks storms, tropical cyclones, floods, and tsunamis 24/7 through close coordination with the US National Weather Service (NWS) and National Hurricane Center (NHC). For seismic hazards, the Bahamas relies on US Geological Survey (USGS). The Met Dept also works closely with NEMA and OPM to activate NEOC and ensure proper warning dissemination to the affected populations and evacuation orders. The National Disaster Plan covers EWS protocols and mechanisms for alerting emergency managers. Over 75% of the population of The Bahamas live in New Providence and Grand Bahama alone, and all are covered by hazard monitoring and Doppler Radar. Early warnings are communicated by multiple means to the citizens via authorization from NEMA, and public bulletins are created to educate or warn the citizens accessible via NEMA's information portal.

Risk management activities in The Bahamas lack clear policy and are mainly accomplished under the direction or funding of outside international agencies. Risk assessments are not regularly performed and are not an integral part of the planning process. Vulnerability is not measured, local/indigenous knowledge is not captured, and climate change is not tracked in risk assessments. Most analyses are conducted post-disaster as a pre-requisite to re-building. The draft National Development Plan Strategy – Vision 2040 seeks to integrate DRR in development policies through strengthening EWSs, land-use policies, and post-disaster assessments to better inform policies. However, the strategy has not been ratified. There is presently no policy, directive, or standard procedure to guide how risk mapping services are performed in The Bahamas. Bahamas National GIS Centre (BNGISC) maintains most maps for the region, but coordination is lacking between NEMA to use the maps for risk mapping and disaster planning/ response. While comprehensive geospatial data exists for New Providence, Grand Bahama, and Abaco islands, comprehensive geospatial data is sparse for Family Islands, particularly in the Southern Bahamas.

In order to reach advanced capacity in the area of Communications and Information Management, The Bahamas can focus their efforts to (a) tailor warnings according to specific audiences or locations; (b) test EWS on a-routine basis; (c) standardize the methods for disaster assessments and record them in a database; (d) perform regular and comprehensive risk assessments not just after disasters and incorporate them into the planning process; and (e) create nationwide data collection, storage, format, and maintenance requirements and mandate the same standards for a Common Operating Picture across all agencies and FIAs.

COMMUNICATION AND INFORMATION

F1

FINDINGS

Risk assessments are not regularly performed in The Bahamas, and instead, analyses are done post-disaster once rebuilding occurs. Private financial organizations conduct irregular assessments of risk and processes and policy in The Bahamas. CCRIF and IDB have both conducted risk assessments in The Bahamas. However, the purposes of these assessments are identified as inputs for financial mechanisms for the private institutions rather than drivers of governmental risk management. We recommend the GoB:

RECOMMENDATIONS

- Develop the capability to conduct internal risk assessments.
  Require and incorporate risk assessments into planning.
- Develop the capability to assess vulnerability and include vulnerability assessments in planning.
- Include climate change in risk assessments.
- Incorporate local knowledge into risk assessments.
- Task BNGISC with hosting risk assessment information, but make sure it is available to all who require it.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

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

U.N. SUSTAINABLE DEVELOPMENT GOALS

13

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

COMMUNICATION AND INFORMATION

F2

FINDINGS

Risk Mapping requirements do not exist in The Bahamas. Although several dedicated and capable government organizations maintain the ability to manage and create maps, no requirements exist within or throughout these organizations that relate specifically to risk mapping. While comprehensive geospatial data exists for New Providence, Grand Bahama, and Abaco islands, comprehensive geospatial data is sparse for Family Islands, particularly in the Southern Bahamas. The BNGISC is the lead government agency for geospatial data and mapping but has yet to implement country-wide risk mapping and issue-associated mapping requirements. We recommend:

RECOMMENDATIONS

- NEMA and BNGISC should coordinate on mapping requirements.
- BNGIS develops maps and ensures availability.
- Hold EOC training, so ESF personnel understand BNGIS capabilities and know what to ask for concerning mapping.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g), (h), (i), (j)

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

COMMUNICATION AND INFORMATION

F3

FINDINGS

The Department of Meteorology tracks storms, tropical cyclones, floods, and tsunamis. They maintain a 24-hour presence at the Lyndon Pindling International Airport in Nassau to provide forecasting and hazard monitoring services to the GoB. The Department of Meteorology maintains a close relationship with the United States NWS and the NHC for hurricane modeling and tropical cyclone monitoring. The standard practice for the Department of Meteorology for low cyclone monitoring is to use NWS and NHC models and products for risk communication and situational awareness.

Early warning systems cannot address the needs of specific populations (e.g., vulnerable populations). Special needs and vulnerable populations are not identified or targeted for a larger communication and early warning campaign. Dorian identified this gap as a portion of the population does not speak English and/or has access to media sources, particularly in outlying cays in Northern Abaco. We recommend the GoB:

RECOMMENDATIONS

- Develop the capability to provide warnings in multiple languages.
- Develop alternate means of warning (lights, sirens) should normal communications be interrupted due to the disaster.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (c), (d), (e), (f), (h), (i)

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

COMMUNICATION AND INFORMATION

F4

FINDINGS

Assessment systems and/or procedures exist, but capabilities remain under development and likewise insufficient for major disasters. CDEMA deploys RNAT (Rapid Needs Assessment Team) upon request. Further disaster assessments are coordinated by the NEOC but are executed in silos (Transportation, Communication, Housing, etc.). There is no central feedback system for assessments, so results are received sporadically and not coordinated.

Disaster assessments are roughly outlined in the National Disaster Plan and Instructions for Emergency Situations but are ad hoc during response. The damage assessment procedure begins with an Initial Situation Overview with the intent of informing the Prime Minister, Cabinet Ministers, Permanent Secretaries, and various organization heads of departments of the initial extent of damage caused by a hazard. This overview is conducted "based on observations reported by key organizations and officials through general reconnaissance." No further guidance

(Findings continued...)

is issued regarding Initial Situation Overviews. Damage assessments are coordinated by NEMA and are broken into four categories: Initial Damage Assessments, Damage Assessment and Needs Analysis, Agency Specific Assessments, and Social and Physical Assessments. Each aspect of requirements pertaining to the different damage assessment measures outlines expectations for government agencies to conduct their own assessments and report the findings to NEMA. However, no language exists that links the outcomes of these assessments to post-disaster decision-making processes or protocols.

RECOMMENDATIONS

- Develop assessment standards so no matter who does the assessment, the standards are the same.
- Develop a database for the incorporation of disaster assessments.
- Train personnel on how to properly conduct assessments.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (h)

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

COMMUNICATION AND INFORMATION

F5

FINDINGS

Assessments are conducted, but implementation challenges and other obstacles often limit their utility in the planning process. Since assessments are often conducted within individual ministries, departments, or offices, the collective results of all damage assessments often do not make their way to NEMA for implementation in plans. The information contained in the assessment is not suitable for planning in an operational environment. Assessments done during non-disaster times seem to be more focused and guided and used for long-term planning or financial management decision-making.

RECOMMENDATIONS

- Develop methods to incorporate damage and needs assessments into operational planning.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (d), (e), (f), (g)

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

COMMUNICATION AND INFORMATION

F6

FINDINGS

Data collection and storage varies from agency to agency within the Bahamian government. The Department of Statistics and BNGISC maintain the most significant DM-related data, although neither enforces a strict standard for data collection and storage. However, the data is often incomplete and not shared with relevant stakeholders for planning. The lack of information sharing is not a result of intent but more from practice as there has not been a push for the information.

RECOMMENDATIONS

- Develop standards for data collection and storage.
- Store data in a manner that is accessible throughout the GoB.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (e), (f), (g), (h)

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

COMMUNICATION AND INFORMATION

F7

FINDINGS

No COP exists for The Bahamas NEOC. BNGISC is in the process of developing a web-accessible data viewer, which could be used in conjunction with NEMA as a DM COP/Situational Awareness (SA) tool, but significant data and implementation gaps remain. There are additional options available free of charge to support SA.

RECOMMENDATIONS

- Develop/procure/choose situational awareness tools for use throughout The Bahamas.
- Train on SA tools.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (e), (f), (g), (h)

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

COMMUNICATION AND INFORMATION

F8

FINDINGS

NEMA has begun developing an online dashboard to exchange information with all relevant DM stakeholders, but it has not been fully implemented. The dashboard is primarily designed around NEMA's ability to distribute information to NGOs and internal-government stakeholders.

RECOMMENDATIONS

- Continue development of dashboard and conduct user training.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (e), (f), (g), (h)

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

COMMUNICATION AND INFORMATION

F9

FINDINGS

As far as communications among the DM stakeholders, VHF radios, cell phones, satellite phones, landlines, and email comprise 100% of communications. Nearly all parties have a cell phone and email - RBDF uses VHF to coordinate its assets and effort. VHF radios are used for intra-island communications with the RBPF. WhatsApp is used to a great extent to coordinate and report. While numerous communications methods can be seen as a positive, it also causes disconnects in information processing. If set procedures are not followed, information can often be passed via unofficial means to the wrong parties and lost without EOC action. There is a reliance on personal communications during disasters.

RECOMMENDATIONS

- Develop and train on communication procedures and communication plans.
- Enforce the use of official emails and phone numbers for disaster response activities.
- Use call logs to track incoming/outgoing calls within the EOC, including each ESF.

SUPPORTS U.N. SENDAI FRAMEWORK

Priorities for Action

1, 2, 3

Global Target(s)

D, E

Guiding Principle(s)

(a), (b), (e), (f), (g), (h)

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

THE NDPBA

NATIONAL RECOMMENDATIONS

THE NDPBA
NATIONAL RECOMMENDATIONS

1 UPDATE THE LEGAL FRAMEWORK TO SUPPORT DISASTER PREPAREDNESS IN THE BAHAMAS.

- Evaluate the effectiveness of a focused ministry to oversee disaster risk management, similar to the role of the Ministry for Disaster Preparedness, Management, and Reconstruction, and incorporate needed structural updates into law.
- Create legislation or a national plan that addresses the Sendai Framework and Sustainable Development Goals (SDGs), how those goals will be accomplished, and how they will be tracked.
- Revise and validate the National Development Plan, or similar plan, to provide clear direction and commitment to Disaster Risk Reduction (DRR) and SDGs.
- Establish requirements for each ministry to support DRR planning and response activities.
- Establish and enforce requirements for sector specific disaster plans.

2 BUILD HUMAN RESOURCE CAPACITY ACROSS THE NATION TO SUPPORT DISASTER MANAGEMENT EFFORTS.

- Provide at minimum dedicated personnel for tracking and managing SDGs, training, exercises, planning, and efforts of international NGOs operating in the country.
- Increase staffing to support sustained Emergency Operation Center (EOC) operations.
- Investigate means to provide NEMA staffing support to affected Family Islands while still maintaining operations at the National Emergency Operations Center (NEOC).
- Formalize and diversify the identification of surge staffing resources throughout the disaster management stakeholder community, including non-governmental organizations, the private sector, and other government agencies.
- Promote the development and use of island-pairing arrangements, mutual-aid or other similar mechanisms to address disaster-related technical staffing requirements.

3 FORMALIZE DISASTER MANAGEMENT COMPETENCIES WITHIN NEMA.

- Evaluate the effectiveness of a focused ministry to oversee disaster risk management, similar to the Develop a clear training curriculum for staff members to include minimum training proficiencies and competency checks.
- Develop training curriculum for support staff, including Family Island Administrators (FIAs), Disaster Consultative Committee (DCCs), and Emergency Support Function (ESF) staff.
- Work with academia to develop higher-education opportunities to advance the professionalism of disaster management.

4 DEVELOP A NATIONAL TRAINING AND EXERCISE PROGRAM FOR DISASTER RISK REDUCTION (DRR) AND DISASTER RISK MANAGEMENT (DRM).

- Prioritize funding for dedicated training staff and resources at both the national and island levels.
- Increase training availability by developing a structured annual training schedule and catalog, that supports comprehensive training throughout the year.
- Establish a training curriculum for a diverse audience of stakeholders by leveraging partnerships with academic and non-governmental organizations, to address a comprehensive training and education requirements that will meet current and emerging disaster management and disaster risk reduction requirements.
- Create a long-term exercise plan that is coordinated with national planning efforts.
- Develop an internal capability to design and execute exercises.
- Conduct quarterly tabletop exercises to evaluate disaster plans and training competencies.
- Conduct an annual National Level Exercise involving all ministries, FIAs, DCCs, ESFs and government leadership.
- Develop and support island-level exercise planning and execution capabilities.

5 INCREASE FAMILY ISLAND RESILIENCE AND RESIDENT CAPABILITIES.

- Provide additional funding, equipment, and personnel to the Family Islands to decrease dependency on NEMA in New Providence.
- Create and support a DRR/DRM training track for FIAs and DCCs.
- Require periodic DRR/DRM training for each island/staff.
- Work to develop cross-training relationships among the Family Islands to foster the ability of nearby islands to support each other in times of disaster. This includes additional staffing support for EOCs, logistics, sheltering and supplies.

6 EXPLORE STRATEGIES TO SUBSTANTIALLY INCREASE ANNUAL FUNDING LEVELS FOR THE NATIONAL DISASTER RISK REDUCTION/DISASTER MANAGEMENT FUND.

- Develop a dedicated budgetary framework to support NEMA.
- Fund technical capacity development, especially in hazard monitoring, early warning, and disaster risk and vulnerability assessments.

7 CREATE EVACUATION AND CONTINUITY OF OPERATIONS (COOP)/CONTINUITY OF GOVERNMENT (COG) PLANS FOR ALL LEVELS OF GOVERNMENT.

- Require Evacuation plans for all islands and require annual exercises to test evacuation plans.
- Ensure evacuation plans clearly address the unique procedural requirements for pre-storm and post-storm evacuations. Pre-storm evacuations can be planned and executed in a safer and more orderly fashion to better support the evacuation of citizens. Post-storm evacuations will happen in a more complex response environment and will be inter-mixed with multiple response priorities. All evacuation plans must include clear manifesting procedures, reporting and tracking requirements of evacuees.
- Develop COOP/COG plans for all islands and exercise plans annually.
- Share ministerial and departmental COOP/COG plans to reduce overlapping requirements and increase inter-operability during continuity operations.

8 DEVELOP PLANS AND PROCEDURES FOR ALL PHASES OF DISASTER MANAGEMENT.

- Standardize planning guidance and develop associated templates for multiple hazards covering all disaster management phases and accounting for unique geographical challenges of the archipelago.
- Plans and procedures should be based on the scientific evidence provided in the NDPBA Assessment.
- Plans should include a whole-of-community approach, clearly identifying roles for government, private sector, non-governmental organizations, and the public.
- Develop mitigation plans and establish necessary funding mechanisms for mitigation projects.

9 FULLY IMPLEMENT A STANDARD INCIDENT MANAGEMENT SYSTEM AT ALL LEVELS OF GOVERNMENT.

- Include Incident Command System training for management of the NEOC.
- Train EOC managers in EOC operations and establish a consistent operating and reporting schedule and method for support agencies.
- Implement an ICS-like structure for all islands to standardize operating and reporting procedures.

10 REQUIRE INVENTORY OF DISASTER WAREHOUSES AND MAINTAIN LIST LOCALLY AND AT NEMA HQ.

- Conduct warehouse inventorying and stocking regularly. Leverage technology to ensure real-time inventory is accessible to NEMA leadership.
- Evaluate and update commodity distribution plans.
- Increase number of storage facilities throughout the islands to reduce isolation of resources. Where appropriate consider shared space or non-traditional approaches to meet the unique needs of The Bahamas.

11 ESTABLISH FORMAL MUTUAL AID AGREEMENTS WITH APPROPRIATE PARTIES TO SUPPORT DISASTER MANAGEMENT EFFORTS.

- Review and formalize existing agreements.
- Develop a matrix of mutual assistance agreements and capabilities for quick reference during disasters.

12 FULLY INCORPORATE THE NON-GOVERNMENTAL ORGANIZATIONS AND PRIVATE SECTOR INTO THE NATIONAL DISASTER RISK MANAGEMENT FRAMEWORK.

- Develop plans and procedures to integrate private sector resources into disaster plans and have clear mechanisms for inclusion during response operations.
- Establish a process to ensure that NGO and private sector capabilities, capacity, equipment, and commodities are identified before a disaster and can be activated/mobilized easily during response operations.
- Work with NGO and private sector partners to develop and standardize procedures for the provision, acceptance, and distribution of personnel and material support. This includes clearly articulating the minimum staff competencies needed to support each ESF.

13 IMPROVE AND EXPAND THE NATIONAL SHELTER SYSTEM.

- Develop plans and procedures to integrate private sector resources into disaster plans and have Evaluate shelters annually and include shelter capacity in planning documents.
- Include minimum functional capacity recommendations for shelters, i.e., staffing, resources, space, logistics, WASH.
- Establish and maintain a geospatial data layer on shelter location and capacity with detailed attribute data on the functional capacity. This data should be reviewed annually and made available through API for planning and response operations.
- Practice evidence-based decision making to ensure evacuation and sheltering consider hazard exposures and vulnerabilities as identified by the NDPBA RVA.
- Build community centers that can serve dual-use as shelters, and potentially storage facilities, especially on remote islands.
- Minimize use of schools as shelters.

14 ESTABLISH REQUIREMENTS FOR THE APPLICATION OF RISK AND VULNERABILITY ASSESSMENTS IN ALL DISASTER MANAGEMENT AND DISASTER RISK REDUCTION PLANNING EFFORTS AT THE NATIONAL AND ISLAND LEVELS.

- Formalize the use of a national platform to monitor hazards and ensure availability of information across all levels of government by increase information sharing.
- Increase and formalize Bahamas National GIS Center and the Department of Information Services involvement in disaster risk reduction and disaster risk management efforts.
- Enhance the capabilities of the Bahamas National GIS Center to ensure the establishment of a robust national spatial data infrastructure to promote data quality, consistency, and transparency.
- Improve data collection and information sharing capacities among agencies to monitor risk and vulnerability.
- Provide training on capabilities of Bahamas National GIS Center and the map services they can provide.

15 INCREASE INFORMATION ACCESS AND SHARING AMONG ALL DISASTER MANAGEMENT STAKEHOLDERS BY INTEGRATING AN EARLY WARNING SYSTEM AND COMMON OPERATIONAL PLATFORM.

- Formalize the use of a national platform to monitor hazards and ensure availability of information across all levels of government by increase information sharing.
- Increase and formalize Bahamas National GIS Center and the Department of Information Services involvement in disaster risk reduction and disaster risk management efforts.
- Enhance the capabilities of the Bahamas National GIS Center to ensure the establishment of a robust national spatial data infrastructure to promote data quality, consistency, and transparency.
- Provide training on capabilities of Bahamas National GIS Center and the map services they can provide.

16 DEVELOP A FORMAL MECHANISM TO ASSESS PROGRESS MADE TOWARD ACHIEVEMENT OF DISASTER RISK REDUCTION (DRR) AND SUSTAINABLE DEVELOPMENT GOALS (SDGS).

- Establish the necessary mechanisms to support the participation of all relevant ministries in assessing disaster risk reduction and sustainable development goals.
- Identify and appropriately train dedicated staff to monitor and manage DRR and SDG monitoring.
- Ensure DRR/SDG goals are incorporated into at all levels of government.
- Establish the formal quarterly reviews of progress on SDGs with stakeholders.

17 DEVELOP A NATIONAL RISK TRANSFER STRATEGY FOR NATURAL HAZARDS.

- In collaboration with existing regional hazard insurance mechanisms, such as the Caribbean Catastrophe Risk Insurance Facility (CCRIF), introduce and augment hurricane insurance options for households and the private sector.
- Ensure that improvements in data collection, information sharing, and risk analysis (Recommendation 14) are integrated into policies to incentivize evidence based risk transfer.
- Work toward establishing mandatory national hazard insurance to strengthen the resilience of the social safety net post-disaster.

18 INSTITUTIONALIZE STANDARDS FOR DAMAGE AND NEEDS ASSESSMENTS; ADOPT A METHODOLOGY AND CONDUCT TRAINING.

- Formalize the adoption of a damage and needs assessment methodology to be used throughout the country for all disaster assessments.
- Conduct training at the national and island levels to ensure that post-disaster assessments and data are standardized and compatible.
- Establish official requirements for non-governmental stakeholder involvement in disaster assessments to promote greater interagency collaboration.

19 ENHANCE RESILIENCE THROUGH EFFORTS TO REDUCE VULNERABILITY AND INCREASE COPING CAPACITY.

- Promote environmental stewardship through policy and practice.
- Ensure building codes properly reflect hazard zones and are enforced. Work to build new infrastructure that uses the latest technology and international best practices to reduce environmental impacts.
- Enforce building codes and implement policy deterrents for non-compliance, especially in coastal areas.
- Promote community readiness through education and public outreach campaigns.
- Expand the Community Emergency Response Team (CERT) program.

20 PLAN FOR INCREASING POPULATION PRESSURES.

- Closely monitor population changes to anticipate resource constraints that could increase risk and vulnerability.
- Consider specific resource and infrastructure constraints of localities to support sustainable development.
- Ensure through policy and practice the engagement of local stakeholders, including vulnerable and marginalized groups, to actively promote equity and build resilience.
- Ensure that health care, shelter and emergency service resources are regularly reviewed and realigned based on the risk and vulnerability assessment to best support areas of high vulnerability and low island capacity.

21 REDUCE MARGINALIZATION AND PROMOTE GENDER EQUALITY.

- Continue efforts to monitor and reduce gender-based discrimination and bias. Promote policies that support economic and educational opportunities for women, including equal income, employment, and access to credit.
- Actively engage women and other marginalized groups in disaster management and community plans. Provide equal opportunities throughout society to reduce disparities and incorporate feedback mechanisms into policies and programs to ensure effective implementation.
- Build a gender responsive environment by ensuring all disaster plans appropriately address gender issues.

22 REASSESS PROGRESS MADE TOWARD DISASTER RISK REDUCTION AND RESILIENCE GOALS.

- Update the NDPBA, including both the RVA and DMA analyses, to track progress toward reducing vulnerabilities, increasing coping capacities, and building disaster management capabilities in support of The Bahamas Disaster Risk Reduction and Sustainable Development Goals for a more resilient nation.
- Implement a Risk Resilience and Adaption Analysis (R2A2) following the implementation of the five-year plan of action.

THE BAHAMAS NATIONAL RECOMMENDATIONS

5-YEAR PLAN

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
RECOMMENDATION 1 Update the legal framework to support disaster preparedness in The Bahamas	**RECOMMENDATION 3** Formalize disaster management competencies within NEMA			
RECOMMENDATION 2 Build human resource capacity across the nation to support DM efforts				
RECOMMENDATION 4 Develop a national training and exercise program for DRR/DRM				
	RECOMMENDATION 5 Increase family island resilience and resident capabilities			
RECOMMENDATION 12 Fully incorporate nongovernmental organizations and private sector into the national Disaster Risk Management framework national and island levels				
RECOMMENDATION 14 Establish requirements for the application of risk and vulnerability assessments in all disaster management and DRR planning efforts at the national and island levels				
	RECOMMENDATION 15 Increase information access and sharing among all Disaster Management stakeholders by integrating an early warning system and common operational platform			
RECOMMENDATION 17 Develop a national risk transfer strategy for natural hazards				
RECOMMENDATION 21 Reduce marginalization and promote gender equality				

THE BAHAMAS NATIONAL RECOMMENDATIONS

5-YEAR PLAN

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
		RECOMMENDATION 6		
		Explore strategies to substantially increase annual funding levels for the DRRM Fund		
	RECOMMENDATION 7		**RECOMMENDATION 8**	
	Create evacuation and Continuity of Operations (COOP)/ Continuity of Government (COG) plans for all levels of government		Develop plans and procedures for all stages of disaster management	
				RECOMMENDATION 22
		RECOMMENDATION 10		Reassess progress made toward Disaster Risk Reduction and resilience goals
		Require inventory of disaster warehouses and maintain list locally and at NEMA HQ		
	RECOMMENDATION 11		**RECOMMENDATION 9**	
	Establish formal mutual aid agreements with appropriate parties to support DM efforts		Fully implement a standard Incident Management System at all levels of government	
	RECOMMENDATION 13			
	Improve and expand national shelter system			
	RECOMMENDATION 16			
	Develop a formal mechanism to assess progress made toward achievement of Disaster Risk Reduction (DRR) and Sustainable Development Goals (SDGs)			
		RECOMMENDATION 18		
		Institutionalize standards for damage and needs assessments; adopt a methodology and conduct training		
	RECOMMENDATION 19			
	Enhance resilience through efforts to reduce vulnerability and increase coping capacity			
		RECOMMENDATION 20		
		Plan for increasing population pressures		

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ISLAND RISK PROFILES

SUBNATIONAL ASSESSMENT RESULTS

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https://www.pdc.org/wp-content/uploads/NDPBA-BHS-Island-Profiles-Merged.pdf

ISLAND RISK PROFILES

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

Each set of recommendations look at one of the top four drivers of resilience through the lens of the existing national disaster management structure in The Bahamas. The recommendations are designed to be concise, actionable, and supported by the data.

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APPENDIX

ADDITIONAL RESOURCES

Additional information related to The Bahamas NDPBA Assessment can be found in DisasterAWARE.

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