THE BAHAMAS

GRAND BAHAMA

NDPBA ISLAND PROFILE

PDC | GLOBAL

THE BAHAMAS
GRAND BAHAMA

CAPITAL: WEST END

Area: 530 sq. mi (1,372.7 sq. km)

RISK AND VULNERABILITY
COMPONENT SCORE

MULTI-HAZARD RISK (MHR) - Moderate
Score: 0.388 • Rank: 8/17

RESILIENCE (R) - Very High
Score: 0.608 • Rank: 2/17

MULTI-HAZARD EXPOSURE (MHE) - Very High
Score: 0.964 • Rank: 1/17

VULNERABILITY (V) - Very Low
Score: 0.376 • Rank: 15/17

COPING CAPACITY (CC) - Very High
Score: 0.782 • Rank: 2/17

Population (2010 Census)
51,368

Population in Poverty
31.2%

Average Annual Foreign Arrivals Per Capita
11.8

Households with Piped Water
98.3%

Prevalence of Crowded Housing
22.7%

*For more information on data and components please visit: https://bit.ly/2LqVoUO

MULTI-HAZARD EXPOSURE (MHE)

RANK: 1 / 17 ISLANDS
SCORE: 0.964

MHE
0.964

Raw MHE
0.928

Relative MHE
1.000

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Note: Population values from PDC's All-hazard Impact Model (AIM) leverage 2020 estimates for The Bahamas. Values may exceed 2010 Census population.

Tropical Cyclone Winds
100.0%
54,355
$6.2 Billion

Storm Surge
68.1%
36,989
$4.3 Billion

Flooding
98.3%
53,438
$6.1 Billion

Wildfire
64.4%
35,001
$4.6 Billion

Landslide
0.2%
101
$18.8 Million

Sea Level Rise
<0.01%
< 25
$6.9 Million

VULNERABILITY (V)

RANK: 15 / 17 ISLANDS ASSESSED
SCORE: 0.376

Vulnerability in Grand Bahama is primarily driven by Environmental Stress and Population Pressures. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress

0 — 1 **SCORE: 0.737** **RANK: 3/17** ISLANDS ASSESSED

91.7% Coral reef exposed to local threats

98.3% Coral reef exposed to thermal stress

22.4% Tree cover loss

0.89 per mi. (0.56 per km) Historical hurricane hits per length of coastline

Household Composition Vulnerability

0 — 1 **SCORE: 0.086** **RANK: 14/17** ISLANDS ASSESSED

3.0% Disability

6.0% Elderly population (65+)

Clean Water Access Vulnerability

0 — 1 **SCORE: 0.154** **RANK: 17/17** ISLANDS ASSESSED

98.3% Households with piped water

99.6% Households with flush toilets

1.7% Households with shared toilet facilities

Housing and Transportation Vulnerability

0 — 1 **SCORE: 0.380** **RANK: 15/17** ISLANDS ASSESSED

22.7% Crowded housing

16.6% Population without private vehicle

36.8% Housing built before 1980

Economic Constraints

0 — 1 **SCORE: 0.395** **RANK: 10/17** ISLANDS ASSESSED

49.2 Economic dependency ratio

$169 Government benefits received (Bahamian Dollars)

54.0% Non-wage earning population

31.2% Poverty rate

Gender Inequality

0 — 1 **SCORE: 0.395** **RANK: 11/17** ISLANDS ASSESSED

0.70
Ratio female to male income

1.08
Ratio female to male avg. years of school

15
Adolescent birth rate (per 1,000)

Population Pressures

0 — 1 **SCORE: 0.486** **RANK: 7/17** ISLANDS ASSESSED

9.3%
Average population change (2000 - 2010)

11.8
Average annual foreign arrivals per capita

1,138.7
Average annual foreign arrivals per sq. mile

7.2
Migration per 100 persons

ISLAND CAPACITY (IC)

RANK: 6 / 17 ISLANDS ASSESSED
SCORE: 0.559

Grand Bahama exhibits weaker Island Capacity in the areas of Health Care Capacity and Emergency Service Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Island Capacity score.

Economic Capacity

0 — 1 **SCORE: 0.581** **RANK: 6/17** ISLANDS ASSESSED

0.7%
Households receiving remittances

$15,000
Median income, Bahamian dollars

Environmental Capacity

0 — 1 **SCORE: 0.523** **RANK: 5/17** ISLANDS ASSESSED

0.1%
Protected areas

48%
Coastline protected by natural habitat

0.14 oz. per sq. ft (42.08 g per sq. m)
Standing fish stock

Infrastructure Capacity

0 — 1 **SCORE: 0.560** **RANK: 11/17** ISLANDS ASSESSED

Health Care Capacity **SCORE: 0.444** **RANK: 5/17** ISLANDS ASSESSED

12.9
Physicians per 10,000

32.3
Nurses & midwives per 10,000

3.9
Clinics per 10,000

94.3%
DTP3 Vaccine coverage rate

Transportation Capacity **SCORE: 0.635** **RANK: 4/17** ISLANDS ASSESSED

2.91 mi per sq. mi (1.81 km per sq. km)
Road density

Communications Capacity **SCORE: 0.691** **RANK: 11/17** ISLANDS ASSESSED

68.2%
Internet access

49.1%
Mobile coverage

Emergency Services Capacity **SCORE: 0.497** **RANK: 12/17** ISLANDS ASSESSED

2.22 mi (3.58 km)
Average distance to police station

5.08 mi (8.18 km)
Average distance to shelter

0.1
Shelter capacity per 100 persons

Energy Capacity **SCORE: 0.532** **RANK: 16/17** ISLANDS ASSESSED

98.9%
Households with electricity

25.6%
Households with liquid propane gas

LOGISTICS CAPACITY (LC)

RANK: 1 / 18 ISLANDS ASSESSED
SCORE: 1.000

Logistics Capacity describes the ability of the island to ensure efficient storage, movement, and delivery of resources key for effective humanitarian assistance and disaster relief operations. Logistics Capacity is driven by distances to a major airport, major seaport, and disaster warehouse.

0 mi (0 km)
Distance to port

0 mi (0 km)
Distance to airport

0 mi (0 km)
Distance to warehouse

COPING CAPACITY (CC)

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.

RANK: 2 / 17 ISLANDS ASSESSED
SCORE: 0.782

RESILIENCE (R)

Resilience in The Bahamas was calculated by using a combination of Vulnerability, and Coping Capacity (including both Island Capacity and Logistics Capacity).

RANK: 2 / 17 ISLANDS ASSESSED
SCORE: 0.608

HAZARD-SPECIFIC RISK (HSR)

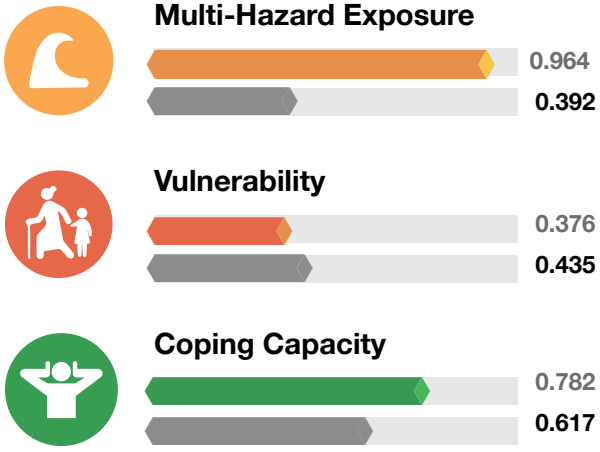
Tropical Cyclone Winds	**RANK:** 14 / 17 ISLANDS ASSESSED	**SCORE:** 0.377
Storm Surge	**RANK:** 12 / 17 ISLANDS ASSESSED	**SCORE:** 0.369
Flooding	**RANK:** 6 / 17 ISLANDS ASSESSED	**SCORE:** 0.392
Wildfire	**RANK:** 3 / 17 ISLANDS ASSESSED	**SCORE:** 0.392
Landslide	**RANK:** 13 / 17 ISLANDS ASSESSED	**SCORE:** 0.267
Sea Level Rise	**RANK:** 13 / 17 ISLANDS ASSESSED	**SCORE:** 0.297

MULTI-HAZARD RISK (MHR)

8 / 17
RANK WITHIN ISLANDS
Score: 0.388

Grand Bahama's score and ranking are due to Very High Multi-hazard Exposure combined with Very Low Vulnerability and Very High Coping Capacity scores.

Multi-hazard risk component scores compared to overall average country scores:



GRAND BAHAMA RECOMMENDATIONS

1

Environmental Stress

Environmental stressors such as the depletion, degradation, or contamination of natural resources can exacerbate natural hazards and negatively impact the health, safety, and economic security of Grand Bahama's population.

Grand Bahama ranks 3rd highest for overall Environmental Stress, with the 4th highest loss in tree cover over the last twenty years, the 4th highest percentage of coral reef under thermal stress, and the 5th highest percentage of coral reef exposed to local threats. Grand Bahama also has the highest overall Multi-Hazard Exposure ranking relative to other islands in The Bahamas.

While much of the tree loss can be attributed to hurricane impact, economic development trends must also be monitored for environmental impacts. Implement environmental programs to decrease the potential for loss of natural vegetation and encourage replanting and growth of new vegetation. Develop programs to monitor coral reef stress and provide added protections such as environmental protected areas, buffers, set-backs or exclusion zones. Ensure climate change is considered in planning efforts. Provide training and education focused on sustainable development and environmental stewardship for both private and public entities. Review building codes and coastal development plans for long-term sustainability of natural and built environments.

GRAND BAHAMA RECOMMENDATIONS

2

Population Pressures

Rapid changes in population size and distribution can alter population vulnerability characteristics presenting planning challenges and destabilizing social, economic, and environmental systems. Increased population pressures require disaster managers to realign needs, institutional structures, and available resources to support delivery of basic resources before, during, and after an event.

Grand Bahama ranks 7th highest for overall Population Pressures in The Bahamas, with the 5th highest migration rate and 6th highest density of foreign arrivals. In addition, Grand Bahama saw a population increase of nearly 10% between 2000 and 2010. Rapid changes in population size and distribution can alter population vulnerability characteristics, presenting planning challenges and destabilizing social, economic, and environmental systems. Increased population pressures require disaster managers to realign needs, institutional structures, and available resources to support delivery of basic resources before, during, and after an event.

Review and update planning documents, considering changes in population. This includes planning for government services during normal operations and disasters. Develop programs to account for and serve the cultural needs of migrant populations, including the provision of services in other languages. Consider language barriers when crafting public alert and warning communications to ensure that all residents understand when to take life-saving action during a disaster.

Given Grand Bahama's very high Multi-Hazard Exposure and growing population, review plans and policies to address coastline protections, safer building codes and enhanced personal/family disaster preparedness.

GRAND BAHAMA RECOMMENDATIONS

3

Health Care Capacity

Robust access to skilled caregivers and the dedicated facilities for the treatment of injury and disease during non-disaster times greatly enhances the ability of the served population to absorb and manage post-disaster impacts to health, and increases the likelihood that disaster associated health and medical impacts may be addressed.

Grand Bahama has fewer than four clinics per 10,000 persons and just under 13 physicians per 10,000 people. As the 2nd most populous island and having the highest Multi-Hazard Exposure in The Bahamas, a lack of skilled health care professionals and resources in Grand Bahama creates limitations in meeting emergent medical needs. The resulting triage of limited medical resources can exacerbate mass casualties and acute disease outbreaks during disaster situations.

Identify potential locations for additional health care services. Modernize hospital services and capabilities to ensure that hospital care levels are adequate for the population served. Work with the Ministry of Health and Wellness to promote comprehensive health education programs, including nutrition, exercise, vaccination, child, and maternal health to promote the overall wellbeing and quality of life on the island.

GRAND BAHAMA RECOMMENDATIONS

4

Emergency Service Capacity

Societies establish capacities to manage emergencies that scale from day-to-day events up to catastrophes that impact all of society. Establishing and maintaining a broad range of systems and resources to support emergency services in Grand Bahama will increase the capacity for disaster management and response.

Grand Bahama has the 6th lowest Emergency Services Capacity when compared to the rest of The Bahamas. This is mainly driven by low shelter capacities (3rd lowest) and the 4th greatest distance to an emergency shelter (over 8 km).

Many of the island's emergency shelters were compromised by Hurricane Dorian. Evaluate the number and capacity of emergency shelters in relation to the potential need to shelter the island's permanent and transient population at any given time. Review recent disaster lessons learned and ensure plans are in place and practiced for pre- and post-hurricane evacuation and sheltering operations. Given Grand Bahama's exposure to flooding, wildfire, hurricane wind, and storm surge hazards, ensure that existing and new shelters are located outside hazard zones and built to withstand hazard impacts. Maintain adequate supplies to serve potential shelter populations.

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