

**BARBADOS** 

# **SAINT ANDREW**

# **NDPBA SUBNATIONAL PROFILE**



# BARBADOS SAINT ANDREW

Area: 36 km2



# **RISK AND VULNERABILITY**

**COMPONENT SCORE** 



## **MULTI-HAZARD RISK (MHR)**

- High

Score: 0.507 • Rank: 4/11



Population (2010 Census)

4,631



## **RESILIENCE (R)**

- Very Low

Score: 0.411 • Rank: 10/11



Population Density (persons per sq km)

129



#### **MULTI-HAZARD EXPOSURE (MHE)**

- Low

Score: 0.345 • Rank: 8/11



**Poverty Rate** 

17.1%



## **VULNERABILITY (V)**

- High

Score: 0.535 • Rank: 3/11



Housing Built Prior to

1991

64.1%



## **COPING CAPACITY (CC)**

- Very Low

Score: 0.358 • Rank: 10/11



Households with Unimproved Sanitation

18.9%



# MULTI-HAZARD EXPOSURE (MHE)

**RANK: 8 / 11 PARISHES ASSESSED** 

**SCORE: 0.345** 



MHE 0.345

Raw MHE 0.002

Relative MHE 0.688

#### **ESTIMATED EXPOSURE TO EACH HAZARD:**



**Coastal Flooding** 

<1%

**\$** 12

Buildings Exposed: <1%

Critical Infrastructure Exposed: 0%



**Hurricane Winds** 

100%

**4,590** 

Buildings Exposed: 100%

Critical Infrastructure Exposed: 100%



**Earthquake** 

100%

**4,590** 

Buildings Exposed: 100%

Critical Infrastructure Exposed: 100%



Landslide

89%

**4,070** 

Buildings Exposed: 88%

Critical Infrastructure Exposed: 100%



**Extreme Heat** 

**35%** 

**1.600** 

Buildings Exposed: 32%

Critical Infrastructure Exposed: 81%



Sea Level Rise

<1%

**2** 

Buildings Exposed: <1%

Critical Infrastructure Exposed: **0%** 



Flash Flood

64%

**2,930** 

Buildings Exposed: 59%

Critical Infrastructure Exposed: 75%



**T**sunami

0%

**&** 0

Buildings Exposed: 0%

Critical Infrastructure Exposed: 0%

NOTE: Population exposure values for Barbados are estimated using PDC's AIM model. Values may differ from Census population.



# MULTI-HAZARD EXPOSURE (MHE)

**RANK: 8 / 11 PARISHES ASSESSED** 

**SCORE: 0.345** 

# **ESTIMATED EXPOSURE TO EACH HAZARD (CONTINUED):**



**Volcanic Ashfall** 

100%

**4,590** 

Buildings Exposed: 100%

Critical Infrastructure Exposed: 100%



Wildfire

4%

**4** 190

Buildings Exposed: 4%

Critical Infrastructure Exposed: **0%** 



# **VULNERABILITY (V)**

**RANK: 3 / 11 PARISHES ASSESSED** 

**SCORE: 0.535** 

Vulnerability in Saint Andrew is primarily driven by Clean Water Access Vulnerability and Housing and Transportation Vulnerability. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



# **Information Access Vulnerability**

0 1

81.9% Primary School Attendance Rate **53.8%**Secondary
School
Attendance
Rate

81.8% Household Access to Radio 91.6% Household Access to Television

SCORE: 0.450



# **Economic Constraints**

0

SCORE: 0.346

**RANK: 7/11 PARISHES ASSESSED** 

**RANK: 5/11 PARISHES ASSESSED** 

**0.48**Economic
Dependency
Ratio

17.1% Poverty Rate 30.4% GINI Coefficient



## **Environmental Stress**

SCORE: 0.342

**RANK: 8/11 PARISHES ASSESSED** 

70.4%
Coastline
Exposure to
Local or Global
Threats

3.6% Tree Cover Loss



# **Gender Inequality**



SCORE: 0.555

**RANK: 3/11 PARISHES ASSESSED** 

**0.10**Female to Male Labor Ratio

Female to Male Secondary School Attendance



**RANK: 3 / 11 PARISHES ASSESSED** 

**SCORE: 0.535** 



# **Housing and Transportation Vulnerability**

0 SCORE: 0.837 RANK: 2/11 PARISHES ASSESSED

64.1% Housing Built Prior to 1991 20.9% Household Overcrowding 50.5% Households without a Private Vehicle



# **Household Composition and Vulnerable Health**

0 SCORE: 0.417 RANK: 7/11 PARISHES ASSESSED

3.1

Prevalence of Disability (per 100 persons) 11.0% Population Age 65 and Over 25.7% Population Under Age 18



# **Population Pressures**

1 SCORE: 0.334 RANK: 4/11 PARISHES ASSESSED

1.3%
Average Annual Population Change

129
Population
Density
(persons per
sq km)



# **Clean Water Access Vulnerability**

0 RANK: 1/11 PARISHES ASSESSED

86.3% Households with Piped Water 18.9% Households with Unimproved Sanitation



# **ISLAND CAPACITY (IC)**

**RANK: 10 / 11 PARISHES ASSESSED** 

**SCORE: 0.296** 

Saint Andrew exhibits weaker Island Capacity in the areas of Communications Capacity and Emergency Services and Health Care Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Islands Capacity score.



# **Environmental Capacity**

**SCORE: 0.336 RANK: 4/11 PARISHES ASSESSED** 

1.4% Croplands

-4.2 Net Carbon Flux

2.2% Protected Area 0.0% Protected Coastlines



## Infrastructure Capacity

**SCORE: 0.279 RANK: 11/11 PARISHES ASSESSED** 



#### **Communications Capacity**

0 **SCORE: 0.062 RANK: 10/11 PARISHES ASSESSED** 

69.5% Households with Fixed

Phones

44.2% Households with Computer

33.4% Households with Internet Access



#### **Emergency Services and Health Care Capacity**

1 SCORE: 0.165 **RANK: 11/11 PARISHES ASSESSED** 

8.5 Average Distance to Fire Station (km)

6.7 Average Distance to Hospital or Clinic (km)

6.1 Average Distance to Police Station (km)

1.4 Average Distance to Shelter (km) 0.0 Hospitals and Clinics per 10,000 Persons



#### **Energy Capacity**

**SCORE: 0.609** 

**RANK: 8/11 PARISHES ASSESSED** 

96.3% Households with Electric Lighting

94.9% Households Using Gas for Cooking



# **LOGISTICS CAPACITY (LC)**

**RANK: 7 / 11 PARISHES ASSESSED** 

**SCORE: 0.42** 

Saint Andrew exhibits weaker Logistics Capacity in the areas of Maritime Logistics and Warehouse Access. The bar charts indicate the socioeconomic themes contributing to the overall Logistics Capacity score.



# **Maritime Logistics**

0 ( 1

SCORE: 0.271

**RANK: 8/11 PARISHES ASSESSED** 

**8.5**Average
Distance to
Seaport (km)

215.8
Distance
to External
Medium or
Large Seaport
(km)

**0.00**Port Density (ports per km of coastline)



# Air Support

0

SCORE: 0.581

**RANK: 6/11 PARISHES ASSESSED** 

**154.7** Distance to

Distance to External C130 Airport (km) Average Distance to Airport or Heliport (km)

8.7



# Transportation Capacity

0

SCORE: 0.500

**RANK: 2/11 PARISHES ASSESSED** 

**0.44**Gas Station

Gas Stations per 1,000 Persons Road Density (km of roads per sq km)

3.2



# **Warehouse Access**

0

1 SCORE: 0.326

RANK: 9/11 PARISHES ASSESSED

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16.9

Average Distance to Warehouse (km) 12.2 Distance to CDEMA Sub-Regional Focal Point (km)

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

RANK: 10 / 11 PARISHES ASSESSED

**SCORE: 0.358** 



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

RANK: 10 / 11 PARISHES ASSESSED

SCORE: 0.411

# **KEY FACTORS INFLUENCING RESILIENCE**

Saint Andrew's score and ranking are due to High Vulnerability combined with Very Low Coping Capacity scores.

Below are the four thematic areas with the weakest relative scores:



# **Clean Water Access Vulnerability**

Those without easy or adequate access to water distribution and containment systems face significant demands on daily routines that effectively limit their response and recovery capacity and the ability to maintain livelihoods. Increasing access to improved water and sanitation improves health outcomes and frees up resources to decrease further susceptibility to impacts.



# **Housing and Transportation Vulnerability**

Populations living in older housing, and prior to the enactment of modern building codes, are more susceptible to structural damage and losses as a result of hazard impacts. In addition, higher density living situations such as crowded housing increase susceptibility to negative consequences as a result of hazard exposure. Populations with limited vehicle access are more likely to experience mobility challenges during an evacuation, and have difficulty accessing needed supplies and services before, during and after a hazard event.



# **Maritime Logistics**

Diverse maritime transport options, within and outside the country, offer crucial support for humanitarian efforts and the transit and delivery of disaster relief supplies. Protecting and maintaining port infrastructure and equipment can help safeguard these key assets and sustain functional operations during a disaster.



## **Warehouse Access**

Efficient storage, movement and delivery of resources are key to effective humanitarian assistance and disaster relief operations. Access to both local and regional supply chains can significantly improve the speed and quality of response operations, reducing the negative social and economic impacts of an emergency.



# **HAZARD-SPECIFIC RISK (HSR)**

	Coastal Flooding	RANK: 9 / 11 PARISHES ASSESSED SCORE: 0.134
-M-	Earthquake	RANK: 6 / 11 PARISHES ASSESSED SCORE: 0.543
	Extreme Heat	RANK: 7 / 11 PARISHES ASSESSED SCORE: 0.395
	Flash Flood	RANK: 4 / 11 PARISHES ASSESSED SCORE: 0.462
	Hurricane Winds	RANK: 6 / 11 PARISHES ASSESSED SCORE: 0.543
MÈ	Landslide	RANK: 2 / 11 PARISHES ASSESSED SCORE: 0.743
	Sea Level Rise	RANK: 9 / 11 PARISHES ASSESSED SCORE: 0.069
(Ca)	Tsunami •	RANK: 7 / 11 PARISHES ASSESSED SCORE: 0.000
5	Volcano	RANK: 6 / 11 PARISHES ASSESSED SCORE: 0.543
	Wildfire	RANK: 8 / 11 PARISHES ASSESSED SCORE: 0.190



# **MULTI-HAZARD RISK (MHR)**

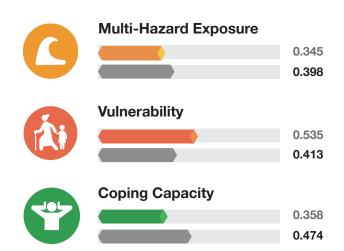
4/11

RANK AMONG PARISHES Score: 0.507

Saint Andrew's score and ranking are due to Low Multi-Hazard Exposure combined with High Vulnerability and Very Low Coping Capacity scores.

Multi-Hazard Risk component scores compared to overall average country scores:





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Better solutions. Fewer disasters.

# Safer World.

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