



**BARBADOS**

**SAINT JOHN**

**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT JOHN

Area: 34 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Moderate

Score: 0.504 • Rank: 5/11



### RESILIENCE (R)

- Low

Score: 0.419 • Rank: 8/11



### MULTI-HAZARD EXPOSURE (MHE)

- Low

Score: 0.350 • Rank: 7/11



### VULNERABILITY (V)

- High

Score: 0.530 • Rank: 4/11



### COPING CAPACITY (CC)

- Low

Score: 0.367 • Rank: 8/11



Population (2010 Census)

**8,617**



Population Density  
(persons per sq km)

**253**



Poverty Rate

**23.9%**



Housing Built Prior to  
1991

**61.5%**



Households with  
Unimproved Sanitation

**13.2%**





## MULTI-HAZARD EXPOSURE (MHE)

**RANK: 7 / 11 PARISHES ASSESSED**  
**SCORE: 0.350**



**MHE**  
**0.350**

**Raw MHE**  
**0.052**

**Relative MHE**  
**0.647**

### ESTIMATED EXPOSURE TO EACH HAZARD:



**Coastal Flooding**

**1%**

**80**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **14%**



**Hurricane Winds**

**100%**

**8,710**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



**Earthquake**

**100%**

**8,710**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



**Landslide**

**41%**

**3,560**

Buildings Exposed: **47%**

Critical Infrastructure Exposed: **67%**



**Extreme Heat**

**65%**

**5,690**

Buildings Exposed: **68%**

Critical Infrastructure Exposed: **65%**



**Sea Level Rise**

**1%**

**67**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **14%**



**Flash Flood**

**30%**

**2,640**

Buildings Exposed: **36%**

Critical Infrastructure Exposed: **36%**



**Tsunami**

**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: 7 / 11 PARISHES ASSESSED  
SCORE: 0.350

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



Volcanic Ashfall

**100%**

**8,710**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**24%**

**2,090**

Buildings Exposed: **23%**

Critical Infrastructure Exposed: **20%**



## VULNERABILITY (V)

**RANK: 4 / 11 PARISHES ASSESSED**  
**SCORE: 0.530**

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



### Information Access Vulnerability



**SCORE: 0.528**

**RANK: 4/11 PARISHES ASSESSED**

**81.8%**

Primary School  
Attendance  
Rate

**52.3%**

Secondary  
School  
Attendance  
Rate

**80.7%**

Household  
Access to  
Radio

**92.2%**

Household  
Access to  
Television



### Economic Constraints



**SCORE: 0.645**

**RANK: 1/11 PARISHES ASSESSED**

**0.48**

Economic  
Dependency  
Ratio

**23.9%**

Poverty Rate

**31.8%**

GINI  
Coefficient



### Environmental Stress



**SCORE: 0.629**

**RANK: 1/11 PARISHES ASSESSED**

**96.1%**

Coastline  
Exposure to  
Local or Global  
Threats

**6.8%**

Tree Cover  
Loss



### Gender Inequality



**SCORE: 0.510**

**RANK: 5/11 PARISHES ASSESSED**

**0.16**

Female to Male  
Labor Ratio

**0.01**

Female  
to Male  
Secondary  
School  
Attendance



## VULNERABILITY (V)

**RANK: 4 / 11 PARISHES ASSESSED**  
**SCORE: 0.530**



### Housing and Transportation Vulnerability

0  1 **SCORE: 0.669** **RANK: 4/11 PARISHES ASSESSED**

**61.5%**

Housing Built  
Prior to 1991

**19.6%**

Household  
Overcrowding

**46.7%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 **SCORE: 0.536** **RANK: 4/11 PARISHES ASSESSED**

**4.4**

Prevalence of  
Disability (per  
100 persons)

**12.7%**

Population  
Age 65 and  
Over

**23.7%**

Population  
Under Age 18



### Population Pressures

0  1 **SCORE: 0.071** **RANK: 11/11 PARISHES ASSESSED**

**0.3%**

Average Annual  
Population  
Change

**253**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 **SCORE: 0.652** **RANK: 2/11 PARISHES ASSESSED**

**89.6%**

Households  
with Piped  
Water

**13.2%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 8 / 11 PARISHES ASSESSED**  
**SCORE: 0.395**

Saint John 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

0  1 **SCORE: 0.220** **RANK: 6/11 PARISHES ASSESSED**

**30.3%**  
Croplands

**-0.9**  
Net Carbon  
Flux

**0.0%**  
Protected Area

**0.0%**  
Protected  
Coastlines



## Infrastructure Capacity

0  1 **SCORE: 0.471** **RANK: 8/11 PARISHES ASSESSED**



## Communications Capacity

0  1 **SCORE: 0.211** **RANK: 9/11 PARISHES ASSESSED**

**71.6%**  
Households  
with Fixed  
Phones

**46.0%**  
Households  
with Computer

**37.9%**  
Households  
with Internet  
Access



## Emergency Services and Health Care Capacity

0  1 **SCORE: 0.364** **RANK: 9/11 PARISHES ASSESSED**

**3.2**  
Average  
Distance to  
Fire Station  
(km)

**7.1**  
Average  
Distance to  
Hospital or  
Clinic (km)

**3.5**  
Average  
Distance to  
Police Station  
(km)

**1.4**  
Average  
Distance to  
Shelter (km)

**0.0**  
Hospitals  
and Clinics  
per 10,000  
Persons



## Energy Capacity

0  1 **SCORE: 0.837** **RANK: 2/11 PARISHES ASSESSED**

**97.6%**  
Households  
with Electric  
Lighting

**95.3%**  
Households  
Using Gas for  
Cooking



## LOGISTICS CAPACITY (LC)

**RANK: 10 / 11 PARISHES ASSESSED**  
**SCORE: 0.339**

Saint John exhibits weaker Logistics Capacity in the areas of Air Support and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Logistics Capacity score.



### Maritime Logistics

0  1 **SCORE: 0.454** **RANK: 4/11 PARISHES ASSESSED**

**4.2**

Average  
Distance to  
Seaport (km)

**227.6**

Distance  
to External  
Medium or  
Large Seaport  
(km)

**0.12**

Port Density  
(ports per km  
of coastline)



### Air Support

0  1 **SCORE: 0.181** **RANK: 11/11 PARISHES ASSESSED**

**165.1**

Distance to  
External C130  
Airport (km)

**11.8**

Average  
Distance to  
Airport or  
Heliport (km)



### Transportation Capacity

0  1 **SCORE: 0.225** **RANK: 9/11 PARISHES ASSESSED**

**0.11**

Gas Stations  
per 1,000  
Persons

**5.0**

Road Density  
(km of roads  
per sq km)



### Warehouse Access

0  1 **SCORE: 0.496** **RANK: 7/11 PARISHES ASSESSED**

**15.8**

Average  
Distance to  
Warehouse  
(km)

**7.1**

Distance to  
CDEMA Sub-  
Regional Focal  
Point (km)





## 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 of Barbados was calculated by using a combination of Island Capacity and Logistics Capacity.

**RANK: 8 / 11** PARISHES ASSESSED  
**SCORE: 0.367**



## RESILIENCE (R)

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

**RANK: 8 / 11** PARISHES ASSESSED  
**SCORE: 0.419**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



### 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.



### 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.



### Air Support

Air transport is a key component of timely response operations, supporting search and rescue, damage assessment efforts, and the delivery of relief supplies. Increasing air support capacity to accommodate C130 aircraft strengthens the ability to quickly deliver and disseminate emergency relief supplies to where they are most needed.

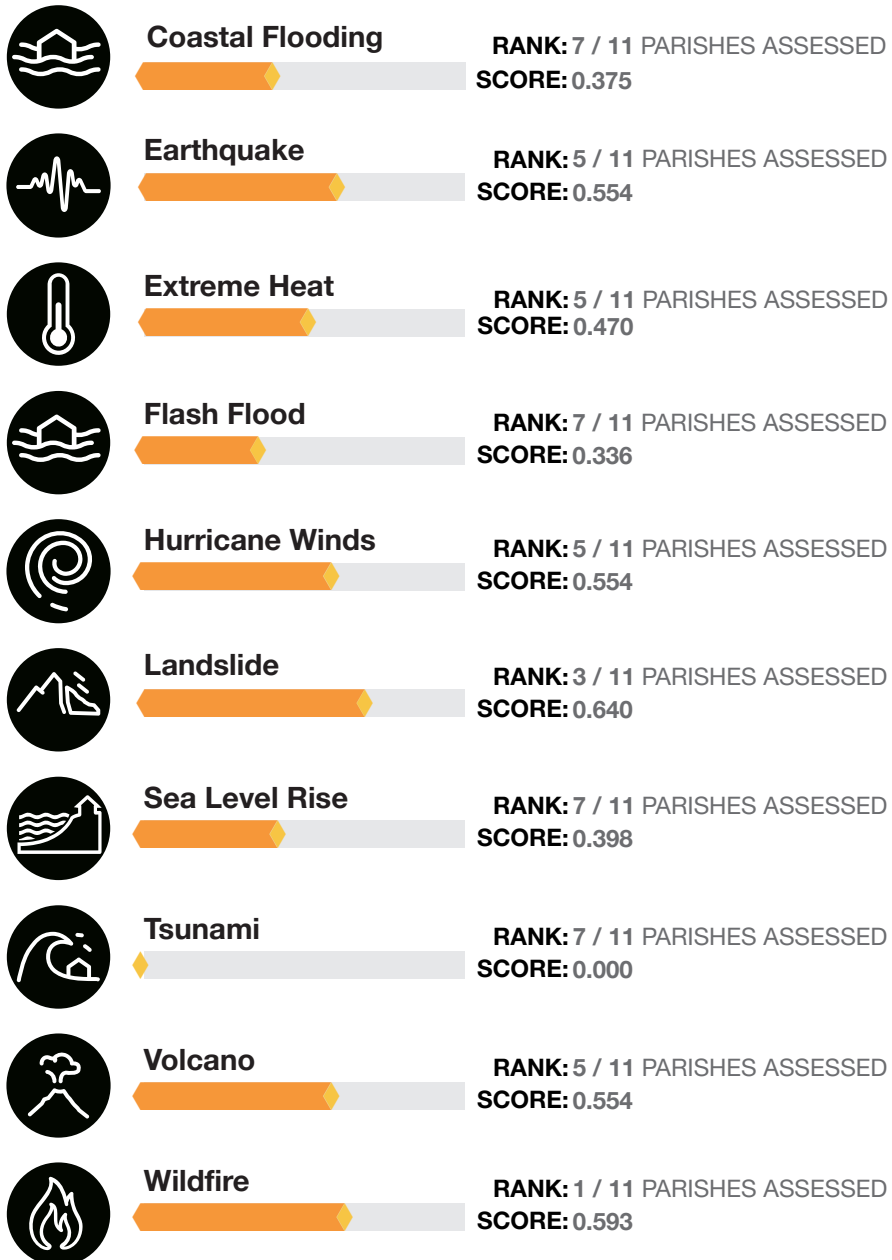


### Transportation Capacity

Dense road networks and refueling locations facilitate the evacuation of populations during a disaster and increase the ability of response stakeholders to access affected populations. Improved transportation capacity supports the ability to distribute resources before, during, and after a disaster.



## HAZARD-SPECIFIC RISK (HSR)





## MULTI-HAZARD RISK (MHR)

**5 / 11**RANK AMONG PARISHES  
Score: 0.504

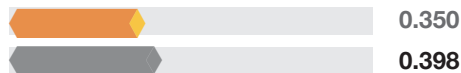
Saint John's score and ranking are due to Low Multi-Hazard Exposure combined with High Vulnerability and Low Coping Capacity scores.

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

PARISH SCORE  
COUNTRY SCORE



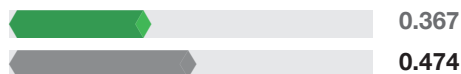
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



**Better solutions.  
Fewer disasters.**

# Safer world.

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