



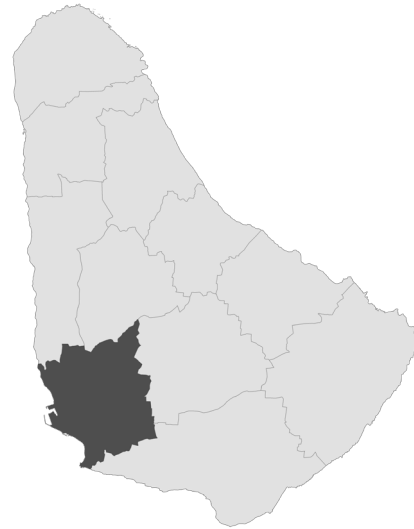
**BARBADOS**

# **SAINT MICHAEL**

**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT MICHAEL

Area: 39 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Very High  
Score: 0.584 • Rank: 1/11



### RESILIENCE (R)

- Low  
Score: 0.546 • Rank: 7/11



### MULTI-HAZARD EXPOSURE (MHE)

- Very High  
Score: 0.842 • Rank: 1/11



### VULNERABILITY (V)

- Very High  
Score: 0.596 • Rank: 1/11



### COPING CAPACITY (CC)

- Very High  
Score: 0.688 • Rank: 1/11



Population (2010 Census)  
**69,604**



Population Density  
(persons per sq km)  
**1,785**



Poverty Rate  
**18.6%**



Housing Built Prior to  
1991  
**74.0%**



Households with  
Unimproved Sanitation  
**9.6%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 1 / 11 PARISHES ASSESSED  
SCORE: 0.842



MHE  
0.842

Raw MHE  
1.000

Relative MHE  
0.683

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**1%**

👤 976

Buildings Exposed: <1%  
Critical Infrastructure Exposed: **24%**



Hurricane Winds

**100%**

👤 81,300

Buildings Exposed: **100%**  
Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

👤 81,300

Buildings Exposed: **100%**  
Critical Infrastructure Exposed: **100%**



Landslide

**1%**

👤 1,090

Buildings Exposed: **2%**  
Critical Infrastructure Exposed: **2%**



Extreme Heat

**75%**

👤 61,200

Buildings Exposed: **83%**  
Critical Infrastructure Exposed: **83%**



Sea Level Rise

**1%**

👤 565

Buildings Exposed: <1%  
Critical Infrastructure Exposed: **22%**



Flash Flood

**71%**

👤 58,000

Buildings Exposed: **81%**  
Critical Infrastructure Exposed: **82%**



Tsunami

**4%**

👤 2,920

Buildings Exposed: **2%**  
Critical Infrastructure Exposed: **25%**

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



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 1 / 11 PARISHES ASSESSED  
SCORE: 0.842

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



Volcanic Ashfall

**100%**

**81,300**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**2%**

**1,400**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **2%**





## VULNERABILITY (V)

**RANK: 1 / 11 PARISHES ASSESSED**  
**SCORE: 0.596**

Vulnerability in Saint Michael is primarily driven by Population Pressures and Housing and Transportation Vulnerability. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.430** **RANK: 6/11 PARISHES ASSESSED**

<b>81.4%</b> Primary School Attendance Rate	<b>54.6%</b> Secondary School Attendance Rate	<b>78.3%</b> Household Access to Radio	<b>93.2%</b> Household Access to Television
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### Economic Constraints

0  1 **SCORE: 0.620** **RANK: 2/11 PARISHES ASSESSED**

<b>0.50</b> Economic Dependency Ratio	<b>18.6%</b> Poverty Rate	<b>31.4%</b> GINI Coefficient
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### Environmental Stress

0  1 **SCORE: 0.567** **RANK: 3/11 PARISHES ASSESSED**

<b>32.0%</b> Coastline Exposure to Local or Global Threats	<b>15.0%</b> Tree Cover Loss
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### Gender Inequality

0  1 **SCORE: 0.263** **RANK: 8/11 PARISHES ASSESSED**

<b>0.12</b> Female to Male Labor Ratio	<b>0.01</b> Female to Male Secondary School Attendance
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## VULNERABILITY (V)

RANK: 1 / 11 PARISHES ASSESSED  
SCORE: 0.596



### Housing and Transportation Vulnerability

0  1 SCORE: 0.919 RANK: 1/11 PARISHES ASSESSED

**74.0%**

Housing Built  
Prior to 1991

**19.2%**

Household  
Overcrowding

**51.9%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.660 RANK: 1/11 PARISHES ASSESSED

**4.7**

Prevalence of  
Disability (per  
100 persons)

**13.0%**

Population  
Age 65 and  
Over

**24.3%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 1.000 RANK: 1/11 PARISHES ASSESSED

**1.9%**

Average Annual  
Population  
Change

**1,785**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.313 RANK: 7/11 PARISHES ASSESSED

**94.0%**

Households  
with Piped  
Water

**9.6%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 4 / 11 PARISHES ASSESSED**  
**SCORE: 0.554**

Saint Michael exhibits weaker Island Capacity in the areas of Communications Capacity and Environmental Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Islands Capacity score.



### Environmental Capacity

0 1 **SCORE: 0.202** **RANK: 10/11 PARISHES ASSESSED**

<b>2.9%</b> Croplands	<b>-0.1</b> Net Carbon Flux	<b>0.0%</b> Protected Area	<b>34.4%</b> Protected Coastlines
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### Infrastructure Capacity

0 1 **SCORE: 0.705** **RANK: 2/11 PARISHES ASSESSED**



### Communications Capacity

0 1 **SCORE: 0.246** **RANK: 7/11 PARISHES ASSESSED**

<b>69.6%</b> Households with Fixed Phones	<b>50.3%</b> Households with Computer	<b>40.7%</b> Households with Internet Access
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### Emergency Services and Health Care Capacity

0 1 **SCORE: 1.000** **RANK: 1/11 PARISHES ASSESSED**

<b>2.9</b> Average Distance to Fire Station (km)	<b>0.9</b> Average Distance to Hospital or Clinic (km)	<b>1.6</b> Average Distance to Police Station (km)	<b>0.6</b> Average Distance to Shelter (km)	<b>3.0</b> Hospitals and Clinics per 10,000 Persons
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### Energy Capacity

0 1 **SCORE: 0.869** **RANK: 1/11 PARISHES ASSESSED**

<b>98.2%</b> Households with Electric Lighting	<b>94.6%</b> Households Using Gas for Cooking
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## LOGISTICS CAPACITY (LC)

**RANK: 1 / 11 PARISHES ASSESSED**  
**SCORE: 0.821**

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



### Maritime Logistics

0  1 **SCORE: 0.796** **RANK: 1/11 PARISHES ASSESSED**

<b>2.7</b> Average Distance to Seaport (km)	<b>224.0</b> Distance to External Medium or Large Seaport (km)	<b>0.34</b> Port Density (ports per km of coastline)
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### Air Support

0  1 **SCORE: 0.791** **RANK: 3/11 PARISHES ASSESSED**

<b>157.1</b> Distance to External C130 Airport (km)	<b>3.4</b> Average Distance to Airport or Heliport (km)
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### Transportation Capacity

0  1 **SCORE: 0.698** **RANK: 1/11 PARISHES ASSESSED**

<b>0.17</b> Gas Stations per 1,000 Persons	<b>12.7</b> Road Density (km of roads per sq km)
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### Warehouse Access

0  1 **SCORE: 1.000** **RANK: 1/11 PARISHES ASSESSED**

<b>3.1</b> Average Distance to Warehouse (km)	<b>0.0</b> Distance to CDEMA Sub-Regional Focal Point (km)
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## 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: 1 / 11** PARISHES ASSESSED  
**SCORE: 0.688**



## RESILIENCE (R)

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

**RANK: 7 / 11** PARISHES ASSESSED  
**SCORE: 0.546**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



### 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.



### 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.



### Communications Capacity

The density, diversity, resilience, and quality of communications infrastructure influence how subnational- and local-level populations are able to facilitate effective and coordinated communication.

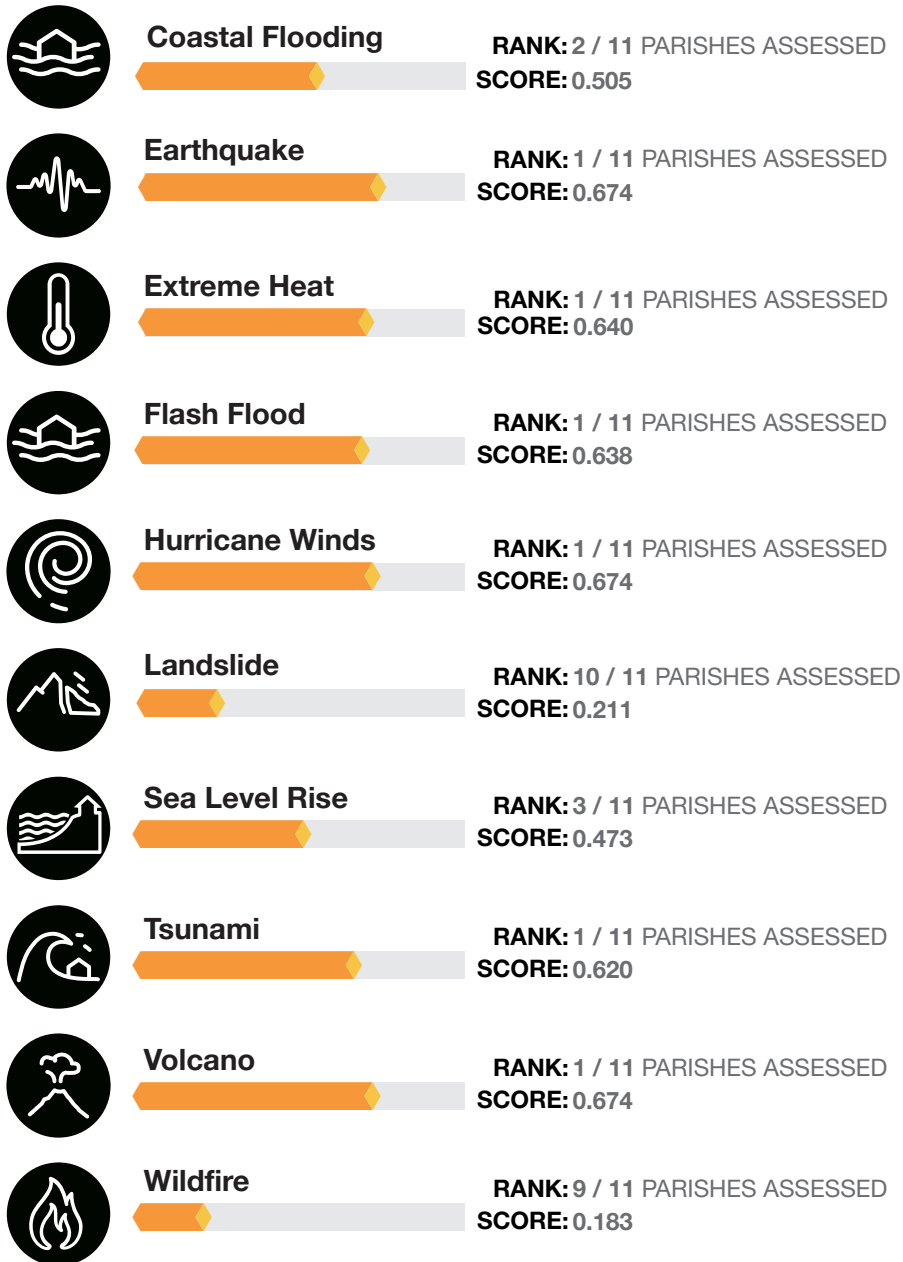


### Transportation Capacity

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)

**1 / 11**

RANK AMONG PARISHES  
Score: 0.584



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

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

**PARISH SCORE** (Color-coded bar)  
**COUNTRY SCORE** (Grey bar)



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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