



**NDPBA**

# **BARBADOS PARISH RISK PROFILES**

**SUBNATIONAL ASSESSMENT RESULTS**





**BARBADOS**

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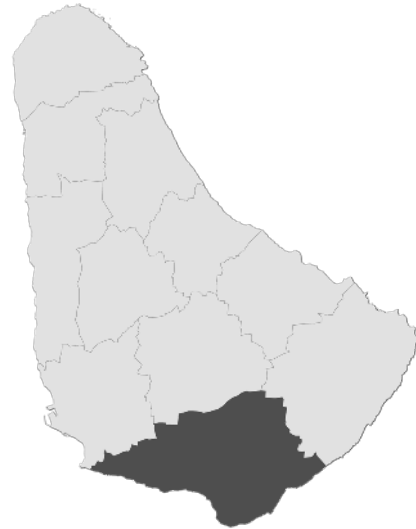
# **CHRIST CHURCH**

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**NDPBA SUBNATIONAL PROFILE**

# BARBADOS CHRIST CHURCH

Area: 57 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Moderate

Score: 0.448 • Rank: 6/11



### RESILIENCE (R)

- Moderate

Score: 0.590 • Rank: 6/11



### MULTI-HAZARD EXPOSURE (MHE)

- High

Score: 0.525 • Rank: 3/11



### VULNERABILITY (V)

- Moderate

Score: 0.392 • Rank: 6/11



### COPING CAPACITY (CC)

- High

Score: 0.571 • Rank: 4/11



Population (2010 Census)

**43,127**



Population Density  
(persons per sq km)

**757**



Poverty Rate

**17.4%**



Housing Built Prior to  
1991

**70.0%**



Households with  
Unimproved Sanitation

**4.2%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 3 / 11 PARISHES ASSESSED  
SCORE: 0.525



MHE  
0.525

Raw MHE  
0.634

Relative MHE  
0.415

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**2%**

👤 1,060

Buildings Exposed: **3%**

Critical Infrastructure Exposed: **18%**



Hurricane Winds

**100%**

👤 55,600

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

👤 55,600

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**0%**

👤 0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Extreme Heat

**76%**

👤 42,000

Buildings Exposed: **79%**

Critical Infrastructure Exposed: **79%**



Sea Level Rise

**1%**

👤 692

Buildings Exposed: **2%**

Critical Infrastructure Exposed: **17%**



Flash Flood

**9%**

👤 4,990

Buildings Exposed: **10%**

Critical Infrastructure Exposed: **17%**



Tsunami

**2%**

👤 1,040

Buildings Exposed: **3%**

Critical Infrastructure Exposed: **17%**

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



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 3 / 11 PARISHES ASSESSED  
SCORE: 0.525

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



Volcanic Ashfall

**100%**

**55,600**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**17%**

**9,280**

Buildings Exposed: **15%**

Critical Infrastructure Exposed: **10%**



## VULNERABILITY (V)

**RANK: 6 / 11 PARISHES ASSESSED**  
**SCORE: 0.392**

Vulnerability in Christ Church is primarily driven by Economic Constraints and Population Pressures. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.272** **RANK: 9/11 PARISHES ASSESSED**

<b>82.7%</b> Primary School Attendance Rate	<b>55.1%</b> Secondary School Attendance Rate	<b>81.6%</b> Household Access to Radio	<b>93.7%</b> Household Access to Television
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### Economic Constraints

0  1 **SCORE: 0.599** **RANK: 3/11 PARISHES ASSESSED**

<b>0.49</b> Economic Dependency Ratio	<b>17.4%</b> Poverty Rate	<b>32.2%</b> GINI Coefficient
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### Environmental Stress

0  1 **SCORE: 0.500** **RANK: 5/11 PARISHES ASSESSED**

<b>14.5%</b> Coastline Exposure to Local or Global Threats	<b>16.0%</b> Tree Cover Loss
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### Gender Inequality

0  1 **SCORE: 0.277** **RANK: 7/11 PARISHES ASSESSED**

<b>0.10</b> Female to Male Labor Ratio	<b>0.07</b> Female to Male Secondary School Attendance
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## VULNERABILITY (V)

RANK: 6 / 11 PARISHES ASSESSED  
SCORE: 0.392



### Housing and Transportation Vulnerability

0  1 SCORE: 0.412 RANK: 7/11 PARISHES ASSESSED

**70.0%**

Housing Built  
Prior to 1991

**15.0%**

Household  
Overcrowding

**37.8%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.503 RANK: 5/11 PARISHES ASSESSED

**4.1**

Prevalence of  
Disability (per  
100 persons)

**14.3%**

Population  
Age 65 and  
Over

**22.5%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.557 RANK: 2/11 PARISHES ASSESSED

**1.4%**

Average Annual  
Population  
Change

**757**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.011 RANK: 11/11 PARISHES ASSESSED

**96.5%**

Households  
with Piped  
Water

**4.2%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 3 / 11 PARISHES ASSESSED**  
**SCORE: 0.569**

Christ Church exhibits weaker Island Capacity in the areas of Environmental Capacity and Energy Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Islands Capacity score.



### Environmental Capacity

0 1 **SCORE: 0.116** **RANK: 11/11 PARISHES ASSESSED**

<b>15.1%</b> Croplands	<b>-0.1</b> Net Carbon Flux	<b>0.9%</b> Protected Area	<b>0.0%</b> Protected Coastlines
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### Infrastructure Capacity

0 1 **SCORE: 0.764** **RANK: 1/11 PARISHES ASSESSED**



### Communications Capacity

0 1 **SCORE: 0.838** **RANK: 2/11 PARISHES ASSESSED**

<b>78.2%</b> Households with Fixed Phones	<b>61.8%</b> Households with Computer	<b>53.0%</b> Households with Internet Access
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### Emergency Services and Health Care Capacity

0 1 **SCORE: 0.727** **RANK: 3/11 PARISHES ASSESSED**

<b>3.1</b> Average Distance to Fire Station (km)	<b>1.9</b> Average Distance to Hospital or Clinic (km)	<b>2.3</b> Average Distance to Police Station (km)	<b>1.0</b> Average Distance to Shelter (km)	<b>1.1</b> Hospitals and Clinics per 10,000 Persons
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### Energy Capacity

0 1 **SCORE: 0.726** **RANK: 5/11 PARISHES ASSESSED**

<b>98.8%</b> Households with Electric Lighting	<b>92.0%</b> Households Using Gas for Cooking
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## LOGISTICS CAPACITY (LC)

**RANK: 4 / 11 PARISHES ASSESSED**  
**SCORE: 0.574**

Christ Church exhibits weaker Logistics Capacity in the areas of Maritime Logistics and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Logistics Capacity score.



### Maritime Logistics

0  1 **SCORE: 0.402** **RANK: 6/11 PARISHES ASSESSED**

<b>3.1</b> Average Distance to Seaport (km)	<b>230.6</b> Distance to External Medium or Large Seaport (km)	<b>0.05</b> Port Density (ports per km of coastline)
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### Air Support

0  1 **SCORE: 0.611** **RANK: 5/11 PARISHES ASSESSED**

<b>162.9</b> Distance to External C130 Airport (km)	<b>4.4</b> Average Distance to Airport or Heliport (km)
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### Transportation Capacity

0  1 **SCORE: 0.433** **RANK: 4/11 PARISHES ASSESSED**

<b>0.13</b> Gas Stations per 1,000 Persons	<b>8.7</b> Road Density (km of roads per sq km)
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### Warehouse Access

0  1 **SCORE: 0.849** **RANK: 2/11 PARISHES ASSESSED**

<b>9.2</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: 4 / 11** PARISHES ASSESSED  
**SCORE: 0.571**



## RESILIENCE (R)

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

**RANK: 6 / 11** PARISHES ASSESSED  
**SCORE: 0.590**

## KEY FACTORS INFLUENCING RESILIENCE

Christ Church's score and ranking are due to Moderate Vulnerability combined with High Coping Capacity scores.

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



### Economic Constraints

Economic constraints have individual, household, community, and region-wide influence. Limitations on available financial resources reduce opportunities to invest in mitigation and preparedness measures and limit the ability to facilitate short- and long-term recovery.



### 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.



### 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.

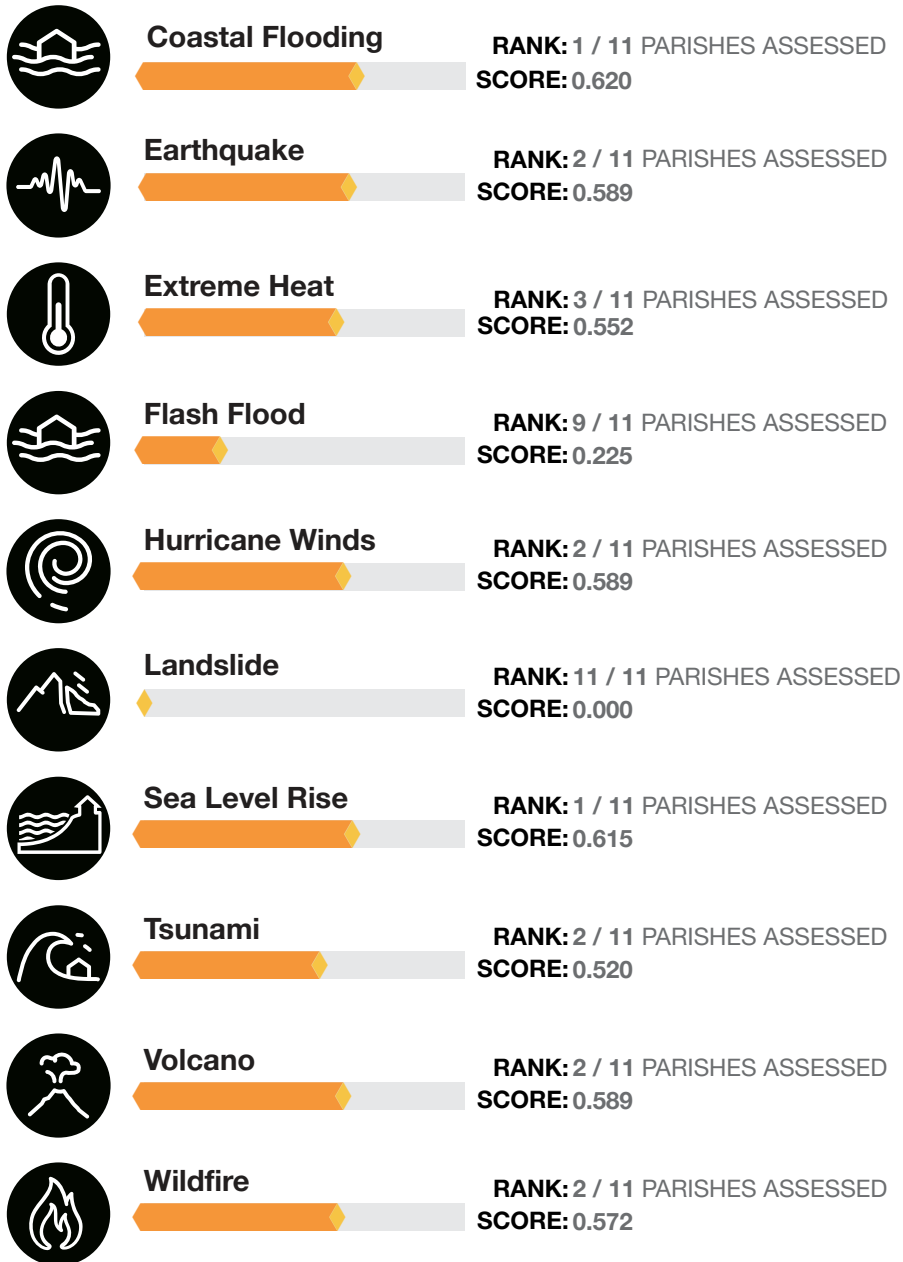


### Transportation Capacity

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)

6 / 11

RANK AMONG PARISHES  
Score: 0.448



Christ Church's score and ranking are due to High Multi-Hazard Exposure combined with Moderate Vulnerability and High Coping Capacity scores.

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

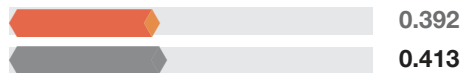
PARISH SCORE  
COUNTRY SCORE



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity





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**BARBADOS**

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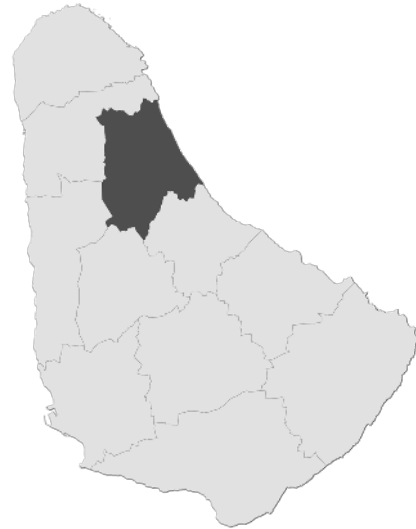
# **SAINT ANDREW**

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**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT ANDREW

Area: 36 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- High

Score: 0.507 • Rank: 4/11



### RESILIENCE (R)

- Very Low

Score: 0.411 • Rank: 10/11



### MULTI-HAZARD EXPOSURE (MHE)

- Low

Score: 0.345 • Rank: 8/11



### VULNERABILITY (V)

- High

Score: 0.535 • Rank: 3/11



### COPING CAPACITY (CC)

- Very Low

Score: 0.358 • Rank: 10/11



Population (2010 Census)

**4,631**



Population Density  
(persons per sq km)

**129**



Poverty Rate

**17.1%**



Housing Built Prior to  
1991

**64.1%**



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%**



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: 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%**

**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 **SCORE: 0.450** **RANK: 5/11 PARISHES ASSESSED**

<b>81.9%</b> Primary School Attendance Rate	<b>53.8%</b> Secondary School Attendance Rate	<b>81.8%</b> Household Access to Radio	<b>91.6%</b> Household Access to Television
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### Economic Constraints

0  1 **SCORE: 0.346** **RANK: 7/11 PARISHES ASSESSED**

<b>0.48</b> Economic Dependency Ratio	<b>17.1%</b> Poverty Rate	<b>30.4%</b> GINI Coefficient
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### Environmental Stress

0  1 **SCORE: 0.342** **RANK: 8/11 PARISHES ASSESSED**

<b>70.4%</b> Coastline Exposure to Local or Global Threats	<b>3.6%</b> Tree Cover Loss
--	-----------------------------------



### Gender Inequality

0  1 **SCORE: 0.555** **RANK: 3/11 PARISHES ASSESSED**

<b>0.10</b> Female to Male Labor Ratio	<b>0.15</b> Female to Male Secondary School Attendance
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## VULNERABILITY (V)

RANK: 3 / 11 PARISHES ASSESSED  
SCORE: 0.535



### Housing and Transportation Vulnerability

0  1 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  1 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

0  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  1 SCORE: 1.000 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

0  1 **SCORE: 0.336** **RANK: 4/11 PARISHES ASSESSED**

<b>1.4%</b> Croplands	<b>-4.2</b> Net Carbon Flux	<b>2.2%</b> Protected Area	<b>0.0%</b> Protected Coastlines
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### Infrastructure Capacity

0  1 **SCORE: 0.279** **RANK: 11/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.062** **RANK: 10/11 PARISHES ASSESSED**

<b>69.5%</b> Households with Fixed Phones	<b>44.2%</b> Households with Computer	<b>33.4%</b> Households with Internet Access
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### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.165** **RANK: 11/11 PARISHES ASSESSED**

<b>8.5</b> Average Distance to Fire Station (km)	<b>6.7</b> Average Distance to Hospital or Clinic (km)	<b>6.1</b> Average Distance to Police Station (km)	<b>1.4</b> Average Distance to Shelter (km)	<b>0.0</b> Hospitals and Clinics per 10,000 Persons
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### Energy Capacity

0  1 **SCORE: 0.609** **RANK: 8/11 PARISHES ASSESSED**

<b>96.3%</b> Households with Electric Lighting	<b>94.9%</b> Households Using Gas for Cooking
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# 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**

<b>8.5</b> Average Distance to Seaport (km)	<b>215.8</b> Distance to External Medium or Large Seaport (km)	<b>0.00</b> Port Density (ports per km of coastline)
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## Air Support

0 1 **SCORE: 0.581** **RANK: 6/11 PARISHES ASSESSED**

<b>154.7</b> Distance to External C130 Airport (km)	<b>8.7</b> Average Distance to Airport or Heliport (km)
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## Transportation Capacity

0 1 **SCORE: 0.500** **RANK: 2/11 PARISHES ASSESSED**

<b>0.44</b> Gas Stations per 1,000 Persons	<b>3.2</b> Road Density (km of roads per sq km)
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## Warehouse Access

0 1 **SCORE: 0.326** **RANK: 9/11 PARISHES ASSESSED**

<b>16.9</b> Average Distance to Warehouse (km)	<b>12.2</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: 10 / 11** PARISHES ASSESSED  
**SCORE: 0.358**



## RESILIENCE (R)

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.

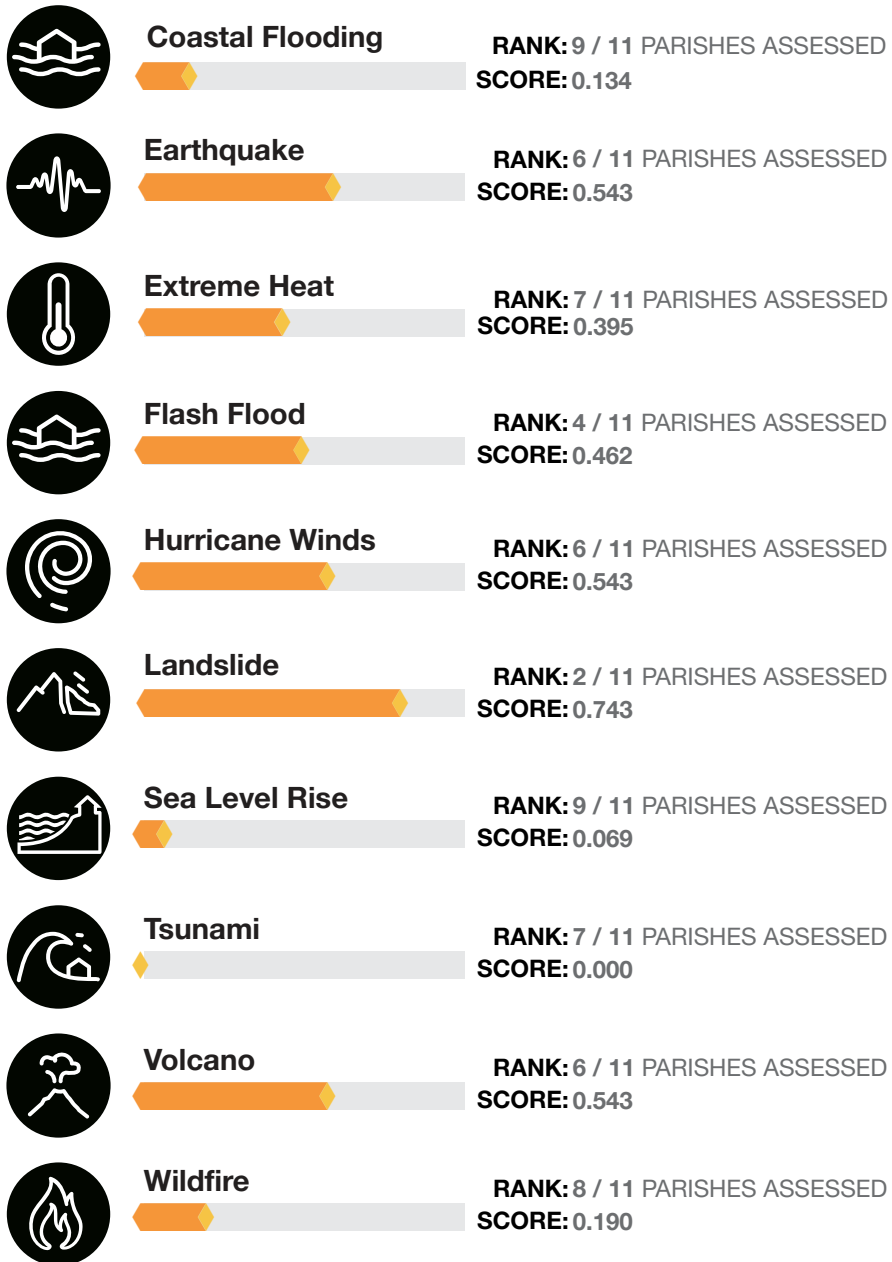


### Warehouse Access

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)





## MULTI-HAZARD RISK (MHR)

4 / 11

RANK AMONG PARISHES  
Score: 0.507



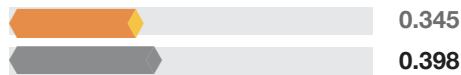
Saint Andrew's score and ranking are due to Low Multi-Hazard Exposure combined with High Vulnerability and Very Low Coping Capacity scores.

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

 PARISH SCORE  
COUNTRY SCORE



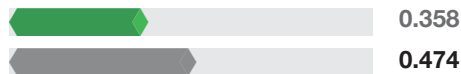
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**BARBADOS**

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# **SAINT GEORGE**

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**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT GEORGE

Area: 44 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Very Low  
Score: 0.271 • Rank: 11/11



### RESILIENCE (R)

- High  
Score: 0.612 • Rank: 3/11



### MULTI-HAZARD EXPOSURE (MHE)

- Very Low  
Score: 0.038 • Rank: 11/11



### VULNERABILITY (V)

- Very Low  
Score: 0.245 • Rank: 9/11



### COPING CAPACITY (CC)

- Moderate  
Score: 0.470 • Rank: 6/11



Population (2010 Census)  
**18,203**



Population Density  
(persons per sq km)  
**414**



Poverty Rate  
**19.7%**



Housing Built Prior to  
1991  
**59.2%**

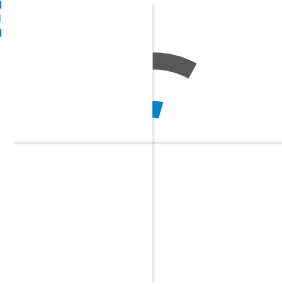


Households with  
Unimproved Sanitation  
**8.7%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 11 / 11 PARISHES ASSESSED  
SCORE: 0.038



MHE  
0.038

Raw MHE  
0.077

Relative MHE  
0.000

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**0%**

0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Hurricane Winds

**100%**

21,000

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

21,000

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**12%**

2,470

Buildings Exposed: **12%**

Critical Infrastructure Exposed: **0%**



Extreme Heat

**<1%**

3

Buildings Exposed: **<1%**

Critical Infrastructure Exposed: **0%**



Sea Level Rise

**0%**

0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Flash Flood

**0%**

0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



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: 11 / 11 PARISHES ASSESSED  
SCORE: 0.038

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



Volcanic Ashfall

**100%**

**21,000**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**5%**

**992**

Buildings Exposed: **6%**

Critical Infrastructure Exposed: **0%**



## VULNERABILITY (V)

**RANK: 9 / 11 PARISHES ASSESSED**  
**SCORE: 0.245**

Vulnerability in Saint George is primarily driven by Housing and Transportation Vulnerability and Economic Constraints. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0 1 **SCORE: 0.063** **RANK: 11/11 PARISHES ASSESSED**

**83.7%**

Primary School  
Attendance  
Rate

**56.8%**

Secondary  
School  
Attendance  
Rate

**86.0%**

Household  
Access to  
Radio

**93.5%**

Household  
Access to  
Television



### Economic Constraints

0 1 **SCORE: 0.387** **RANK: 6/11 PARISHES ASSESSED**

**0.47**

Economic  
Dependency  
Ratio

**19.7%**

Poverty Rate

**31.1%**

GINI  
Coefficient



### Environmental Stress

0 1 **SCORE: 0.194** **RANK: 11/11 PARISHES ASSESSED**

**No Data**

Coastline  
Exposure to  
Local or Global  
Threats

**6.0%**

Tree Cover  
Loss



### Gender Inequality

0 1 **SCORE: 0.188** **RANK: 9/11 PARISHES ASSESSED**

**0.10**

Female to Male  
Labor Ratio

**0.04**

Female  
to Male  
Secondary  
School  
Attendance



## VULNERABILITY (V)

RANK: 9 / 11 PARISHES ASSESSED  
SCORE: 0.245



### Housing and Transportation Vulnerability

0  1 SCORE: 0.400 RANK: 8/11 PARISHES ASSESSED

<b>59.2%</b> Housing Built Prior to 1991	<b>17.7%</b> Household Overcrowding	<b>38.4%</b> Households without a Private Vehicle
--	---	--



### Household Composition and Vulnerable Health

0  1 SCORE: 0.379 RANK: 9/11 PARISHES ASSESSED

<b>3.4</b> Prevalence of Disability (per 100 persons)	<b>11.2%</b> Population Age 65 and Over	<b>24.7%</b> Population Under Age 18
--	--	--



### Population Pressures

0  1 SCORE: 0.086 RANK: 10/11 PARISHES ASSESSED

<b>0.2%</b> Average Annual Population Change	<b>414</b> Population Density (persons per sq km)
---	---



### Clean Water Access Vulnerability

0  1 SCORE: 0.267 RANK: 8/11 PARISHES ASSESSED

<b>94.3%</b> Households with Piped Water	<b>8.7%</b> Households with Unimproved Sanitation
---	---



## ISLAND CAPACITY (IC)

**RANK: 6 / 11 PARISHES ASSESSED**  
**SCORE: 0.522**

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



### Environmental Capacity

0  1 **SCORE: 0.359** **RANK: 3/11 PARISHES ASSESSED**

<b>44.9%</b> Croplands	<b>-0.4</b> Net Carbon Flux	<b>0.0%</b> Protected Area	<b>No Data</b> Protected Coastlines
---------------------------	--------------------------------	-------------------------------	--



### Infrastructure Capacity

0  1 **SCORE: 0.592** **RANK: 7/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.598** **RANK: 6/11 PARISHES ASSESSED**

<b>75.2%</b> Households with Fixed Phones	<b>57.0%</b> Households with Computer	<b>47.0%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.452** **RANK: 7/11 PARISHES ASSESSED**

<b>4.4</b> Average Distance to Fire Station (km)	<b>4.9</b> Average Distance to Hospital or Clinic (km)	<b>2.6</b> Average Distance to Police Station (km)	<b>1.4</b> Average Distance to Shelter (km)	<b>0.0</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.725** **RANK: 6/11 PARISHES ASSESSED**

<b>98.5%</b> Households with Electric Lighting	<b>92.3%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

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

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



### Maritime Logistics

0  1 **SCORE: 0.241** **RANK: 9/11 PARISHES ASSESSED**

<b>7.8</b> Average Distance to Seaport (km)	<b>226.3</b> Distance to External Medium or Large Seaport (km)	<b>No Data</b> Port Density (ports per km of coastline)
--	---	--



### Air Support

0  1 **SCORE: 0.432** **RANK: 8/11 PARISHES ASSESSED**

<b>161.6</b> Distance to External C130 Airport (km)	<b>8.4</b> Average Distance to Airport or Heliport (km)
--	--



### Transportation Capacity

0  1 **SCORE: 0.294** **RANK: 6/11 PARISHES ASSESSED**

<b>0.10</b> Gas Stations per 1,000 Persons	<b>6.7</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.707** **RANK: 5/11 PARISHES ASSESSED**

<b>9.0</b> Average Distance to Warehouse (km)	<b>5.4</b> 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: 6 / 11** PARISHES ASSESSED  
**SCORE: 0.470**



## RESILIENCE (R)

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

**RANK: 3 / 11** PARISHES ASSESSED  
**SCORE: 0.612**

## KEY FACTORS INFLUENCING RESILIENCE

Saint George's score and ranking are due to Very Low Vulnerability combined with Moderate 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.



### Economic Constraints

Economic constraints have individual, household, community, and region-wide influence. Limitations on available financial resources reduce opportunities to invest in mitigation and preparedness measures and limit the ability to facilitate short- and long-term recovery.



### 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.



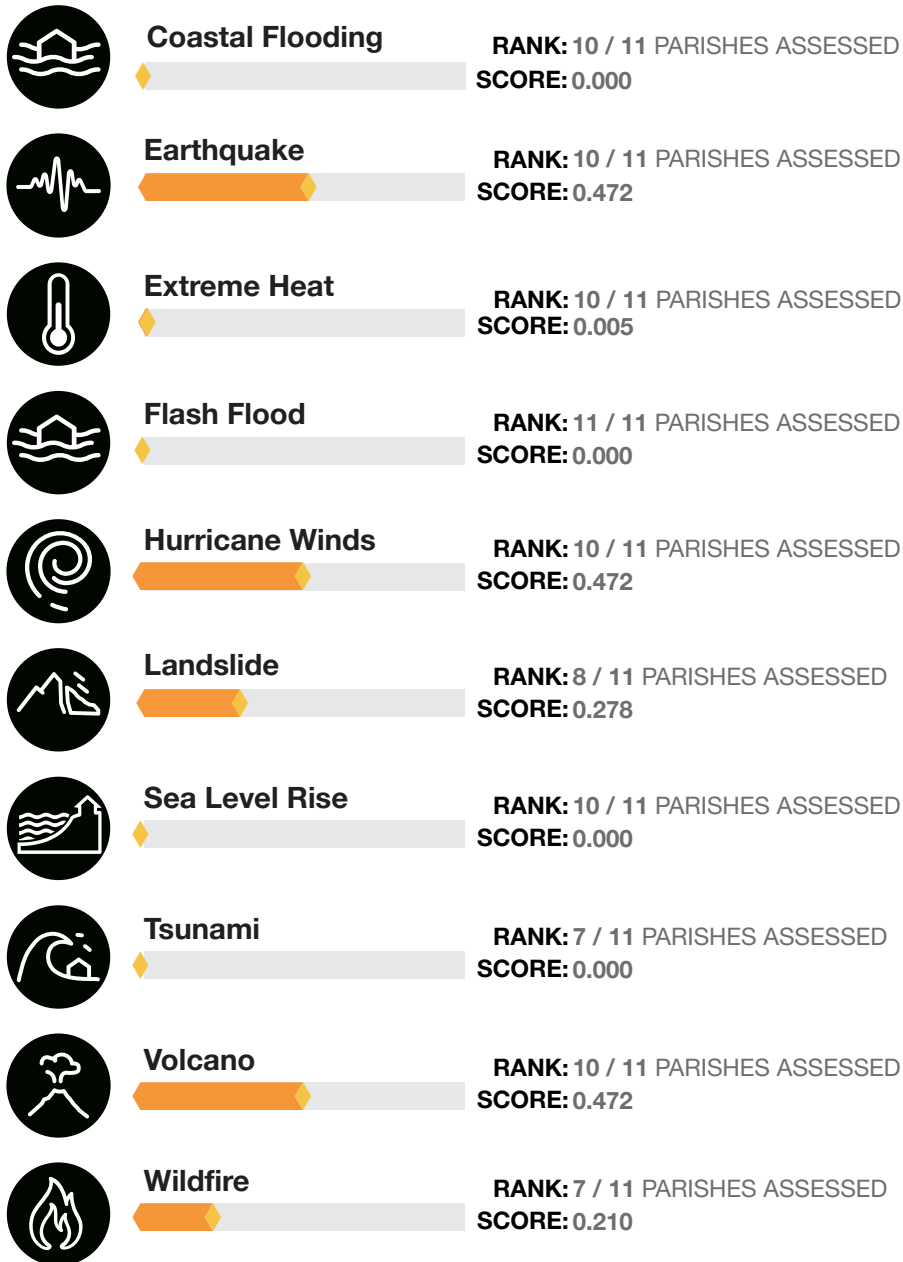
### Transportation Capacity

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)

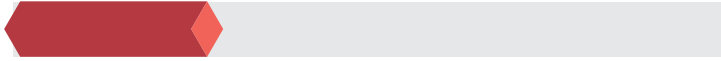




## MULTI-HAZARD RISK (MHR)

11 / 11

RANK AMONG PARISHES  
Score: 0.271



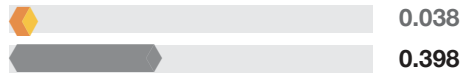
Saint George's score and ranking are due to Very Low Multi-Hazard Exposure combined with Very Low Vulnerability and Moderate Coping Capacity scores.

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

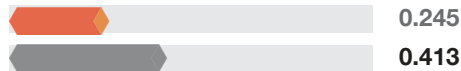
PARISH SCORE  
COUNTRY SCORE



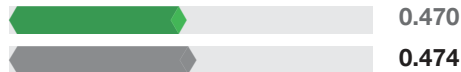
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**BARBADOS**

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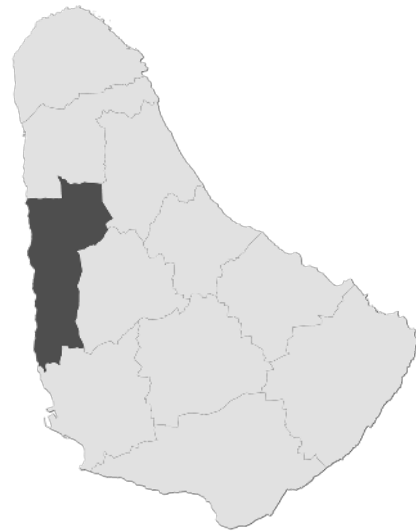
# **SAINT JAMES**

---

**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT JAMES

Area: 31 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Very Low  
Score: 0.345 • Rank: 9/11



### RESILIENCE (R)

- Very High  
Score: 0.663 • Rank: 1/11



### MULTI-HAZARD EXPOSURE (MHE)

- Moderate  
Score: 0.361 • Rank: 6/11



### VULNERABILITY (V)

- Low  
Score: 0.277 • Rank: 8/11



### COPING CAPACITY (CC)

- Very High  
Score: 0.602 • Rank: 2/11



Population (2010 Census)  
**21,258**



Population Density  
(persons per sq km)  
**686**



Poverty Rate  
**13.5%**



Housing Built Prior to  
1991  
**65.7%**



Households with  
Unimproved Sanitation  
**3.9%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 6 / 11 PARISHES ASSESSED  
SCORE: 0.361



MHE  
0.361

Raw MHE  
0.316

Relative MHE  
0.405

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**1%**

**503**

Buildings Exposed: **3%**

Critical Infrastructure Exposed: **10%**



Hurricane Winds

**100%**

**34,300**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

**34,300**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**12%**

**4,140**

Buildings Exposed: **11%**

Critical Infrastructure Exposed: **28%**



Extreme Heat

**43%**

**14,800**

Buildings Exposed: **44%**

Critical Infrastructure Exposed: **20%**



Sea Level Rise

**1%**

**325**

Buildings Exposed: **2%**

Critical Infrastructure Exposed: **9%**



Flash Flood

**37%**

**12,600**

Buildings Exposed: **42%**

Critical Infrastructure Exposed: **59%**



Tsunami

**3%**

**923**

Buildings Exposed: **4%**

Critical Infrastructure Exposed: **34%**

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



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 6 / 11 PARISHES ASSESSED  
SCORE: 0.361

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



Volcanic Ashfall

**100%**

**34,300**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**1%**

**504**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **2%**





## VULNERABILITY (V)

**RANK: 8 / 11 PARISHES ASSESSED**  
**SCORE: 0.277**

Vulnerability in Saint James is primarily driven by Environmental Stress and Household Composition and Vulnerable Health. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.338** **RANK: 7/11 PARISHES ASSESSED**

<b>78.7%</b> Primary School Attendance Rate	<b>55.7%</b> Secondary School Attendance Rate	<b>81.8%</b> Household Access to Radio	<b>93.3%</b> Household Access to Television
--	---	---	--



### Economic Constraints

0  1 **SCORE: 0.209** **RANK: 10/11 PARISHES ASSESSED**

<b>0.47</b> Economic Dependency Ratio	<b>13.5%</b> Poverty Rate	<b>31.1%</b> GINI Coefficient
--	------------------------------	-------------------------------------



### Environmental Stress

0  1 **SCORE: 0.483** **RANK: 6/11 PARISHES ASSESSED**

<b>44.6%</b> Coastline Exposure to Local or Global Threats	<b>11.0%</b> Tree Cover Loss
--	------------------------------------



### Gender Inequality

0  1 **SCORE: 0.278** **RANK: 6/11 PARISHES ASSESSED**

<b>0.09</b> Female to Male Labor Ratio	<b>0.09</b> Female to Male Secondary School Attendance
--	---



## VULNERABILITY (V)

RANK: 8 / 11 PARISHES ASSESSED  
SCORE: 0.277



### Housing and Transportation Vulnerability

0  1 SCORE: 0.218 RANK: 10/11 PARISHES ASSESSED

**65.7%**

Housing Built  
Prior to 1991

**13.8%**

Household  
Overcrowding

**33.5%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.352 RANK: 10/11 PARISHES ASSESSED

**3.6**

Prevalence of  
Disability (per  
100 persons)

**13.0%**

Population  
Age 65 and  
Over

**22.7%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.324 RANK: 5/11 PARISHES ASSESSED

**0.7%**

Average Annual  
Population  
Change

**686**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.013 RANK: 10/11 PARISHES ASSESSED

**96.2%**

Households  
with Piped  
Water

**3.9%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 1 / 11 PARISHES ASSESSED**  
**SCORE: 0.626**

Saint James exhibits weaker Island Capacity in the areas of Energy 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: 0.541** **RANK: 1/11 PARISHES ASSESSED**

<b>0.6%</b> Croplands	<b>-0.7</b> Net Carbon Flux	<b>6.7%</b> Protected Area	<b>46.2%</b> Protected Coastlines
--------------------------	--------------------------------	-------------------------------	--------------------------------------



### Infrastructure Capacity

0  1 **SCORE: 0.663** **RANK: 4/11 PARISHES ASSESSED**



### Communications Capacity

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

<b>79.1%</b> Households with Fixed Phones	<b>65.7%</b> Households with Computer	<b>58.8%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.593** **RANK: 5/11 PARISHES ASSESSED**

<b>3.5</b> Average Distance to Fire Station (km)	<b>2.3</b> Average Distance to Hospital or Clinic (km)	<b>3.1</b> Average Distance to Police Station (km)	<b>1.4</b> Average Distance to Shelter (km)	<b>1.2</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.395** **RANK: 10/11 PARISHES ASSESSED**

<b>98.0%</b> Households with Electric Lighting	<b>89.3%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 3 / 11 PARISHES ASSESSED**  
**SCORE: 0.578**

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



### Maritime Logistics

0  1 **SCORE: 0.407** **RANK: 5/11 PARISHES ASSESSED**

<b>5.8</b> Average Distance to Seaport (km)	<b>216.2</b> Distance to External Medium or Large Seaport (km)	<b>0.00</b> Port Density (ports per km of coastline)
--	---	---



### Air Support

0  1 **SCORE: 0.729** **RANK: 4/11 PARISHES ASSESSED**

<b>152.4</b> Distance to External C130 Airport (km)	<b>6.8</b> Average Distance to Airport or Heliport (km)
--	---



### Transportation Capacity

0  1 **SCORE: 0.408** **RANK: 5/11 PARISHES ASSESSED**

<b>0.12</b> Gas Stations per 1,000 Persons	<b>8.4</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.767** **RANK: 3/11 PARISHES ASSESSED**

<b>9.3</b> Average Distance to Warehouse (km)	<b>3.0</b> 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: 2 / 11** PARISHES ASSESSED  
**SCORE: 0.602**



## RESILIENCE (R)

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

**RANK: 1 / 11** PARISHES ASSESSED  
**SCORE: 0.663**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



### Environmental Stress

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



### Household Composition and Vulnerable Health

Households with dependent populations, such as the very young, elderly and the disabled may have more difficulty with mobilizing and evacuating in a timely fashion and therefore become even more susceptible to harm during times of disaster. Further, the deaf or hard of hearing may not hear audible hazard alerts. Once evacuated, these populations will require additional services and care considerations in the response aftermath and during recovery. Plans and strategies must consider the special accommodations for these populations during response and recovery, including evacuation and sheltering.



### 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.

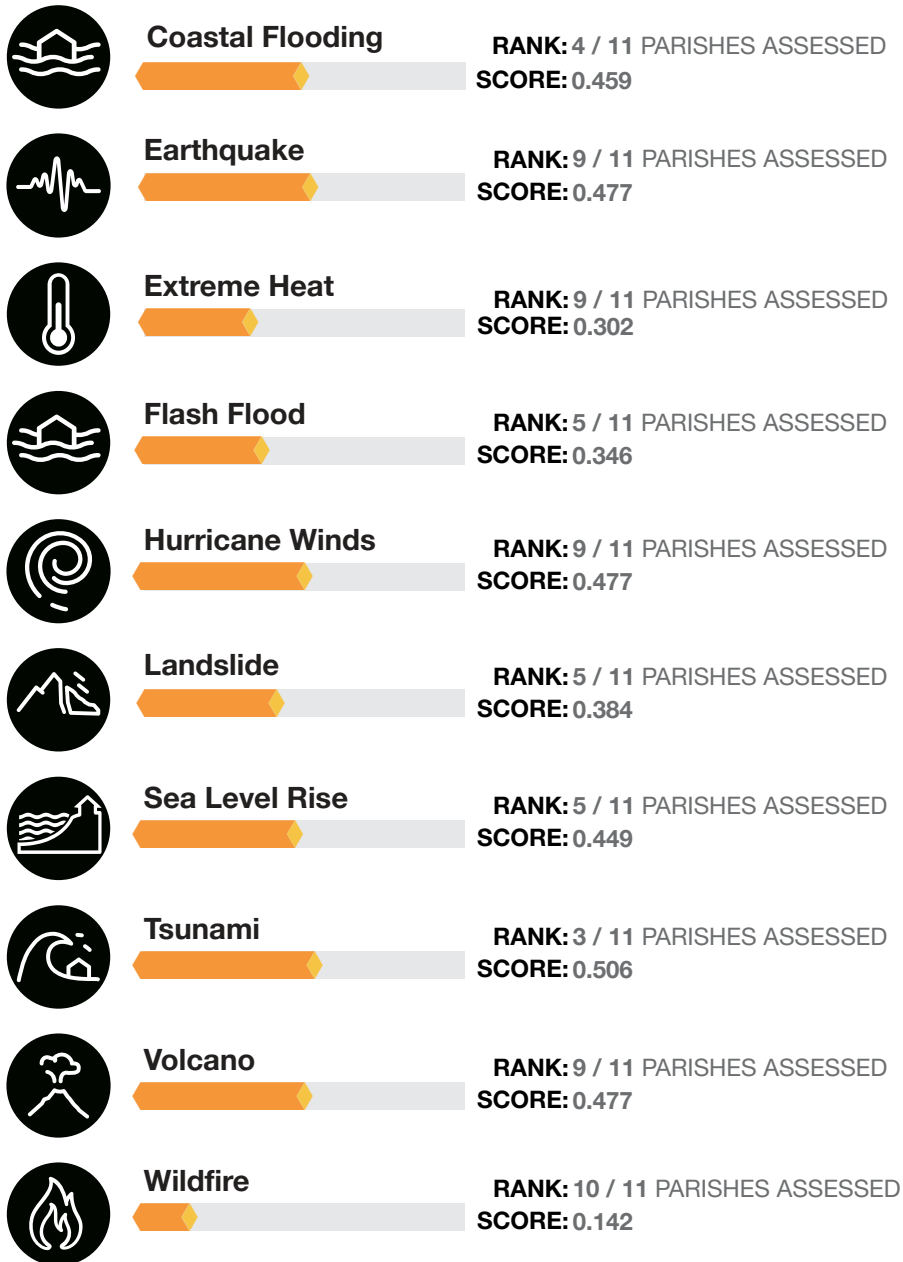


### Transportation Capacity

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)

9 / 11

RANK AMONG PARISHES  
Score: 0.345



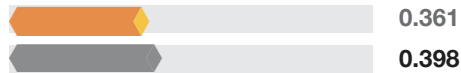
Saint James's score and ranking are due to Moderate Multi-Hazard Exposure combined with Low Vulnerability and Very High Coping Capacity scores.

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

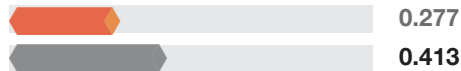
PARISH SCORE  
COUNTRY SCORE



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**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



## 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

0  1 **SCORE: 0.528** **RANK: 4/11 PARISHES ASSESSED**

<b>81.8%</b> Primary School Attendance Rate	<b>52.3%</b> Secondary School Attendance Rate	<b>80.7%</b> Household Access to Radio	<b>92.2%</b> Household Access to Television
--	---	---	--



### Economic Constraints

0  1 **SCORE: 0.645** **RANK: 1/11 PARISHES ASSESSED**

<b>0.48</b> Economic Dependency Ratio	<b>23.9%</b> Poverty Rate	<b>31.8%</b> GINI Coefficient
--	------------------------------	-------------------------------------



### Environmental Stress

0  1 **SCORE: 0.629** **RANK: 1/11 PARISHES ASSESSED**

<b>96.1%</b> Coastline Exposure to Local or Global Threats	<b>6.8%</b> Tree Cover Loss
--	-----------------------------------



### Gender Inequality

0  1 **SCORE: 0.510** **RANK: 5/11 PARISHES ASSESSED**

<b>0.16</b> Female to Male Labor Ratio	<b>0.01</b> 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**

<b>30.3%</b> Croplands	<b>-0.9</b> Net Carbon Flux	<b>0.0%</b> Protected Area	<b>0.0%</b> 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**

<b>71.6%</b> Households with Fixed Phones	<b>46.0%</b> Households with Computer	<b>37.9%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

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

<b>3.2</b> Average Distance to Fire Station (km)	<b>7.1</b> Average Distance to Hospital or Clinic (km)	<b>3.5</b> Average Distance to Police Station (km)	<b>1.4</b> Average Distance to Shelter (km)	<b>0.0</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

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

<b>97.6%</b> Households with Electric Lighting	<b>95.3%</b> 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**

<b>4.2</b> Average Distance to Seaport (km)	<b>227.6</b> Distance to External Medium or Large Seaport (km)	<b>0.12</b> Port Density (ports per km of coastline)
--	---	---



### Air Support

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

<b>165.1</b> Distance to External C130 Airport (km)	<b>11.8</b> Average Distance to Airport or Heliport (km)
--	---



### Transportation Capacity

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

<b>0.11</b> Gas Stations per 1,000 Persons	<b>5.0</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

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

<b>15.8</b> Average Distance to Warehouse (km)	<b>7.1</b> 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.

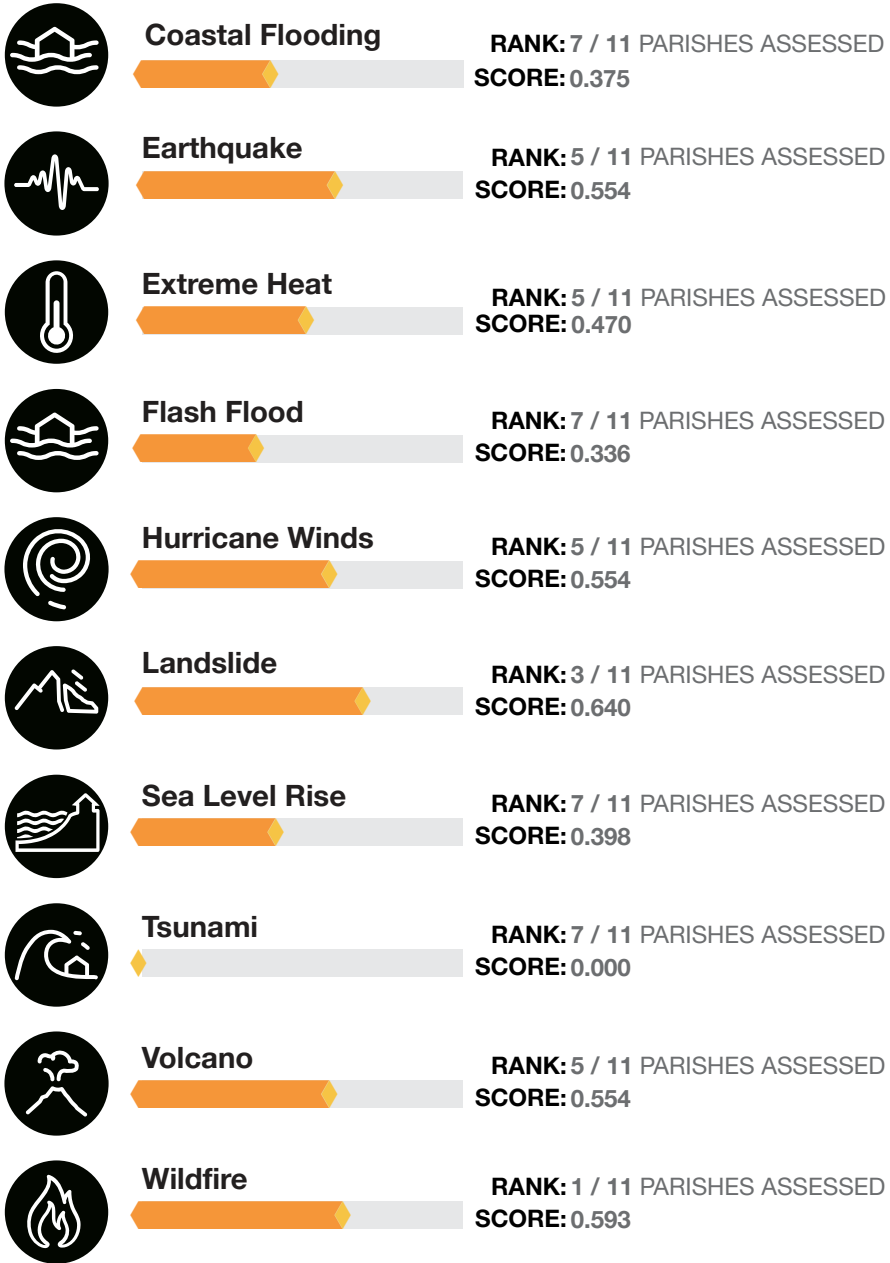


### Transportation Capacity

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



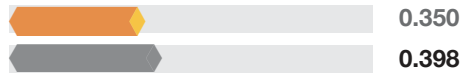
Saint John's score and ranking are due to Low Multi-Hazard Exposure combined with High Vulnerability and Low Coping Capacity scores.

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

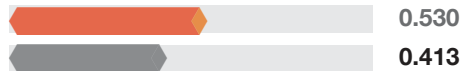
PARISH SCORE  
COUNTRY SCORE



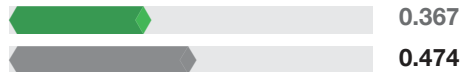
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**BARBADOS**

---

# **SAINT JOSEPH**

---

**NDPBA SUBNATIONAL PROFILE**



# BARBADOS SAINT JOSEPH

Area: 26 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- High

Score: 0.517 • Rank: 3/11



### RESILIENCE (R)

- Very Low

Score: 0.338 • Rank: 11/11



### MULTI-HAZARD EXPOSURE (MHE)

- Very Low

Score: 0.229 • Rank: 9/11



### VULNERABILITY (V)

- Very High

Score: 0.594 • Rank: 2/11



### COPING CAPACITY (CC)

- Very Low

Score: 0.270 • Rank: 11/11



Population (2010 Census)

**5,939**



Population Density  
(persons per sq km)

**228**



Poverty Rate

**20.3%**



Housing Built Prior to  
1991

**65.0%**



Households with  
Unimproved Sanitation

**13.4%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 9 / 11 PARISHES ASSESSED  
SCORE: 0.229



MHE  
0.229

Raw MHE  
0.008

Relative MHE  
0.449

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**2%**

**122**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **7%**



Hurricane Winds

**100%**

**6,330**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

**6,330**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**80%**

**5,070**

Buildings Exposed: **77%**

Critical Infrastructure Exposed: **80%**



Extreme Heat

**0%**

**0**

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Sea Level Rise

**1%**

**91**

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **7%**



Flash Flood

**27%**

**1,740**

Buildings Exposed: **25%**

Critical Infrastructure Exposed: **44%**



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: 9 / 11 PARISHES ASSESSED  
SCORE: 0.229

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



Volcanic Ashfall

**100%**

**6,330**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**<1%**

**20**

Buildings Exposed: **<1%**

Critical Infrastructure Exposed: **0%**



## VULNERABILITY (V)

**RANK: 2 / 11 PARISHES ASSESSED**  
**SCORE: 0.594**

Vulnerability in Saint Joseph is primarily driven by Housing and Transportation Vulnerability and Gender Inequality. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.645** **RANK: 3/11 PARISHES ASSESSED**

<b>81.1%</b> Primary School Attendance Rate	<b>53.4%</b> Secondary School Attendance Rate	<b>77.3%</b> Household Access to Radio	<b>90.6%</b> Household Access to Television
--	---	---	--



### Economic Constraints

0  1 **SCORE: 0.559** **RANK: 4/11 PARISHES ASSESSED**

<b>0.50</b> Economic Dependency Ratio	<b>20.3%</b> Poverty Rate	<b>29.8%</b> GINI Coefficient
--	------------------------------	-------------------------------------



### Environmental Stress

0  1 **SCORE: 0.594** **RANK: 2/11 PARISHES ASSESSED**

<b>62.8%</b> Coastline Exposure to Local or Global Threats	<b>11.0%</b> Tree Cover Loss
--	------------------------------------



### Gender Inequality

0  1 **SCORE: 0.656** **RANK: 2/11 PARISHES ASSESSED**

<b>0.16</b> Female to Male Labor Ratio	<b>0.07</b> Female to Male Secondary School Attendance
--	---



## VULNERABILITY (V)

RANK: 2 / 11 PARISHES ASSESSED  
SCORE: 0.594



### Housing and Transportation Vulnerability

0  1 SCORE: 0.756 RANK: 3/11 PARISHES ASSESSED

**65.0%**

Housing Built  
Prior to 1991

**20.0%**

Household  
Overcrowding

**47.7%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.617 RANK: 2/11 PARISHES ASSESSED

**4.1**

Prevalence of  
Disability (per  
100 persons)

**12.2%**

Population  
Age 65 and  
Over

**25.2%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.393 RANK: 3/11 PARISHES ASSESSED

**1.4%**

Average Annual  
Population  
Change

**228**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.529 RANK: 3/11 PARISHES ASSESSED

**92.2%**

Households  
with Piped  
Water

**13.4%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 9 / 11 PARISHES ASSESSED**  
**SCORE: 0.325**

Saint Joseph 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**

<b>14.6%</b> Croplands	<b>-1.2</b> Net Carbon Flux	<b>1.9%</b> Protected Area	<b>0.0%</b> Protected Coastlines
---------------------------	--------------------------------	-------------------------------	-------------------------------------



### Infrastructure Capacity

0  1 **SCORE: 0.369** **RANK: 9/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.025** **RANK: 11/11 PARISHES ASSESSED**

<b>68.3%</b> Households with Fixed Phones	<b>42.4%</b> Households with Computer	<b>35.4%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.349** **RANK: 10/11 PARISHES ASSESSED**

<b>4.7</b> Average Distance to Fire Station (km)	<b>7.1</b> Average Distance to Hospital or Clinic (km)	<b>2.1</b> Average Distance to Police Station (km)	<b>1.6</b> Average Distance to Shelter (km)	<b>0.0</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.734** **RANK: 4/11 PARISHES ASSESSED**

<b>97.2%</b> Households with Electric Lighting	<b>94.8%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 11 / 11 PARISHES ASSESSED**  
**SCORE: 0.215**

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



### Maritime Logistics

0  1 **SCORE: 0.154** **RANK: 11/11 PARISHES ASSESSED**

<b>9.0</b> Average Distance to Seaport (km)	<b>222.2</b> Distance to External Medium or Large Seaport (km)	<b>0.00</b> Port Density (ports per km of coastline)
--	---	---



### Air Support

0  1 **SCORE: 0.234** **RANK: 10/11 PARISHES ASSESSED**

<b>160.1</b> Distance to External C130 Airport (km)	<b>13.0</b> Average Distance to Airport or Heliport (km)
--	---



### Transportation Capacity

0  1 **SCORE: 0.044** **RANK: 11/11 PARISHES ASSESSED**

<b>0.00</b> Gas Stations per 1,000 Persons	<b>4.1</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.430** **RANK: 8/11 PARISHES ASSESSED**

<b>14.2</b> Average Distance to Warehouse (km)	<b>10.8</b> 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: 11 / 11** PARISHES ASSESSED  
**SCORE: 0.270**



## RESILIENCE (R)

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

**RANK: 11 / 11** PARISHES ASSESSED  
**SCORE: 0.338**



## KEY FACTORS INFLUENCING RESILIENCE

Saint Joseph's score and ranking are due to Very High Vulnerability combined with Very 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.



### Gender Inequality

Marginalized populations are less likely to have their needs met under pre-disaster conditions, and therefore become even more susceptible to harm during times of disaster. Increase gender-based inclusion in all phases of DM, ensuring the implementation at subnational and local levels. Courses of action must recognize the role of women in society and support changes to policies and programs to promote gender-equal access.



### 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.

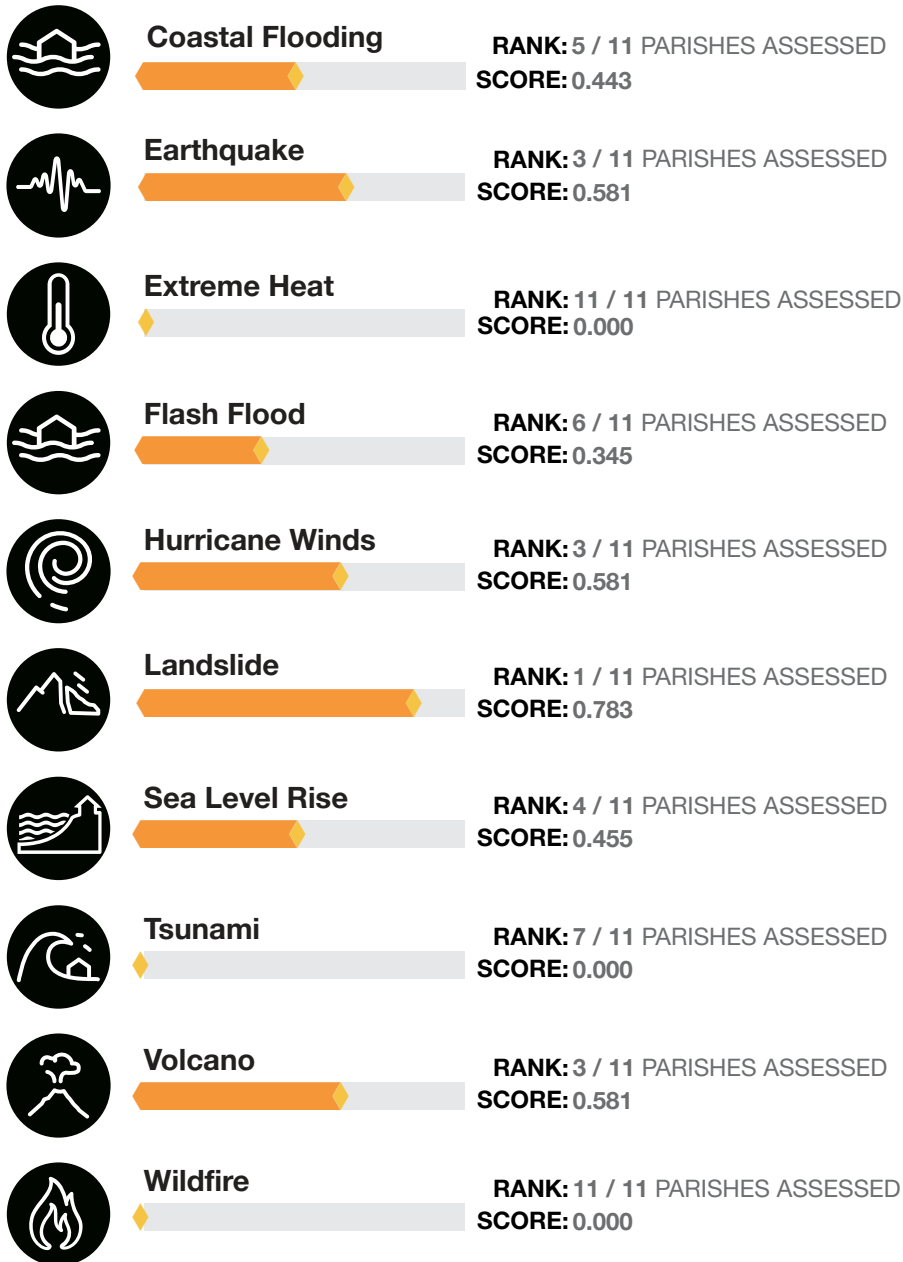


### Maritime Logistics

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.



## HAZARD-SPECIFIC RISK (HSR)





## MULTI-HAZARD RISK (MHR)

**3 / 11**

RANK AMONG PARISHES  
Score: 0.517



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

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

PARISH SCORE  
 COUNTRY SCORE



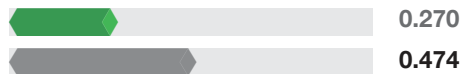
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**BARBADOS**

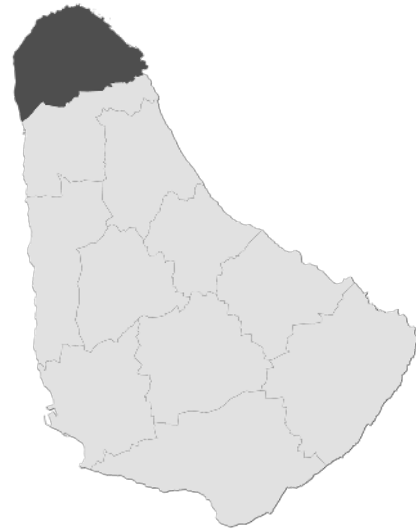
**SAINT LUCY**

---

**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT LUCY

Area: 36 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Very High

Score: 0.573 • Rank: 2/11



### RESILIENCE (R)

- Low

Score: 0.419 • Rank: 8/11



### MULTI-HAZARD EXPOSURE (MHE)

- Very High

Score: 0.557 • Rank: 2/11



### VULNERABILITY (V)

- Moderate

Score: 0.525 • Rank: 5/11



### COPING CAPACITY (CC)

- Very Low

Score: 0.363 • Rank: 9/11



Population (2010 Census)

**8,609**



Population Density  
(persons per sq km)

**239**



Poverty Rate

**17.8%**



Housing Built Prior to  
1991

**60.6%**



Households with  
Unimproved Sanitation

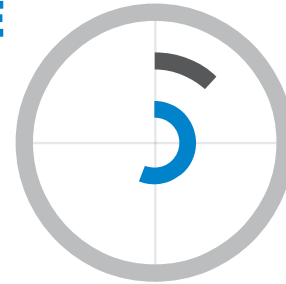
**9.8%**





# MULTI-HAZARD EXPOSURE (MHE)

RANK: 2 / 11 PARISHES ASSESSED  
SCORE: 0.557



MHE  
0.557

Raw MHE  
0.115

Relative MHE  
1.000

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**1%**

👤 68

Buildings Exposed: **2%**

Critical Infrastructure Exposed: **18%**



Hurricane Winds

**100%**

👤 9,830

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

👤 9,830

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**36%**

👤 3,550

Buildings Exposed: **36%**

Critical Infrastructure Exposed: **22%**



Extreme Heat

**100%**

👤 9,830

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Sea Level Rise

**<1%**

👤 43

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **18%**



Flash Flood

**97%**

👤 9,490

Buildings Exposed: **96%**

Critical Infrastructure Exposed: **100%**



Tsunami

**<1%**

👤 26

Buildings Exposed: **1%**

Critical Infrastructure Exposed: **15%**

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



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 2 / 11 PARISHES ASSESSED  
SCORE: 0.557

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



Volcanic Ashfall

**100%**

**9,830**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**10%**

**993**

Buildings Exposed: **11%**

Critical Infrastructure Exposed: **20%**





## VULNERABILITY (V)

**RANK: 5 / 11 PARISHES ASSESSED**  
**SCORE: 0.525**

Vulnerability in Saint Lucy is primarily driven by Information Access Vulnerability and Gender Inequality. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.786** **RANK: 2/11 PARISHES ASSESSED**

<b>77.9%</b> Primary School Attendance Rate	<b>53.7%</b> Secondary School Attendance Rate	<b>76.0%</b> Household Access to Radio	<b>89.5%</b> Household Access to Television
--	---	---	--



### Economic Constraints

0  1 **SCORE: 0.339** **RANK: 8/11 PARISHES ASSESSED**

<b>0.48</b> Economic Dependency Ratio	<b>17.8%</b> Poverty Rate	<b>29.8%</b> GINI Coefficient
--	------------------------------	-------------------------------------



### Environmental Stress

0  1 **SCORE: 0.510** **RANK: 4/11 PARISHES ASSESSED**

<b>63.5%</b> Coastline Exposure to Local or Global Threats	<b>8.8%</b> Tree Cover Loss
--	-----------------------------------



### Gender Inequality

0  1 **SCORE: 0.756** **RANK: 1/11 PARISHES ASSESSED**

<b>0.13</b> Female to Male Labor Ratio	<b>0.18</b> Female to Male Secondary School Attendance
--	---



## VULNERABILITY (V)

RANK: 5 / 11 PARISHES ASSESSED  
SCORE: 0.525



### Housing and Transportation Vulnerability

0  1 SCORE: 0.518 RANK: 5/11 PARISHES ASSESSED

**60.6%**

Housing Built  
Prior to 1991

**17.5%**

Household  
Overcrowding

**44.4%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.612 RANK: 3/11 PARISHES ASSESSED

**5.3**

Prevalence of  
Disability (per  
100 persons)

**12.5%**

Population  
Age 65 and  
Over

**23.4%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.228 RANK: 6/11 PARISHES ASSESSED

**0.9%**

Average Annual  
Population  
Change

**239**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.455 RANK: 4/11 PARISHES ASSESSED

**91.2%**

Households  
with Piped  
Water

**9.8%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 11 / 11 PARISHES ASSESSED**  
**SCORE: 0.282**

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



### Environmental Capacity

0  1 **SCORE: 0.203** **RANK: 8/11 PARISHES ASSESSED**

<b>33.5%</b> Croplands	<b>-0.3</b> Net Carbon Flux	<b>0.0%</b> Protected Area	<b>0.0%</b> Protected Coastlines
---------------------------	--------------------------------	-------------------------------	-------------------------------------



### Infrastructure Capacity

0  1 **SCORE: 0.316** **RANK: 10/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.230** **RANK: 8/11 PARISHES ASSESSED**

<b>70.0%</b> Households with Fixed Phones	<b>48.5%</b> Households with Computer	<b>40.4%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.438** **RANK: 8/11 PARISHES ASSESSED**

<b>14.5</b> Average Distance to Fire Station (km)	<b>3.1</b> Average Distance to Hospital or Clinic (km)	<b>3.0</b> Average Distance to Police Station (km)	<b>1.1</b> Average Distance to Shelter (km)	<b>1.0</b> Hospitals and Clinics per 10,000 Persons
--	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.280** **RANK: 11/11 PARISHES ASSESSED**

<b>95.3%</b> Households with Electric Lighting	<b>92.6%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 6 / 11 PARISHES ASSESSED**  
**SCORE: 0.444**

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



### Maritime Logistics

0  1 **SCORE: 0.630** **RANK: 3/11 PARISHES ASSESSED**

<b>4.2</b> Average Distance to Seaport (km)	<b>209.1</b> Distance to External Medium or Large Seaport (km)	<b>0.05</b> Port Density (ports per km of coastline)
--	---	---



### Air Support

0  1 **SCORE: 0.872** **RANK: 2/11 PARISHES ASSESSED**

<b>148.7</b> Distance to External C130 Airport (km)	<b>5.7</b> Average Distance to Airport or Heliport (km)
--	--



### Transportation Capacity

0  1 **SCORE: 0.274** **RANK: 7/11 PARISHES ASSESSED**

<b>0.10</b> Gas Stations per 1,000 Persons	<b>6.2</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.000** **RANK: 11/11 PARISHES ASSESSED**

<b>23.4</b> Average Distance to Warehouse (km)	<b>18.3</b> 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: 9 / 11** PARISHES ASSESSED  
**SCORE: 0.363**



## 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 Lucy's score and ranking are due to Moderate Vulnerability combined with Very Low Coping Capacity scores.

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



### Information Access Vulnerability

Limitations in information access can impede a population's ability to receive, understand, and take action. Emergency messages must take into account the unique information access constraints of the region. Emergency messages presented to the population must contain clear and simple information to ensure an appropriate response to save lives and reduce losses.



### Gender Inequality

Marginalized populations are less likely to have their needs met under pre-disaster conditions, and therefore become even more susceptible to harm during times of disaster. Increase gender-based inclusion in all phases of DM, ensuring the implementation at subnational and local levels. Courses of action must recognize the role of women in society and support changes to policies and programs to promote gender-equal access.



### 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.

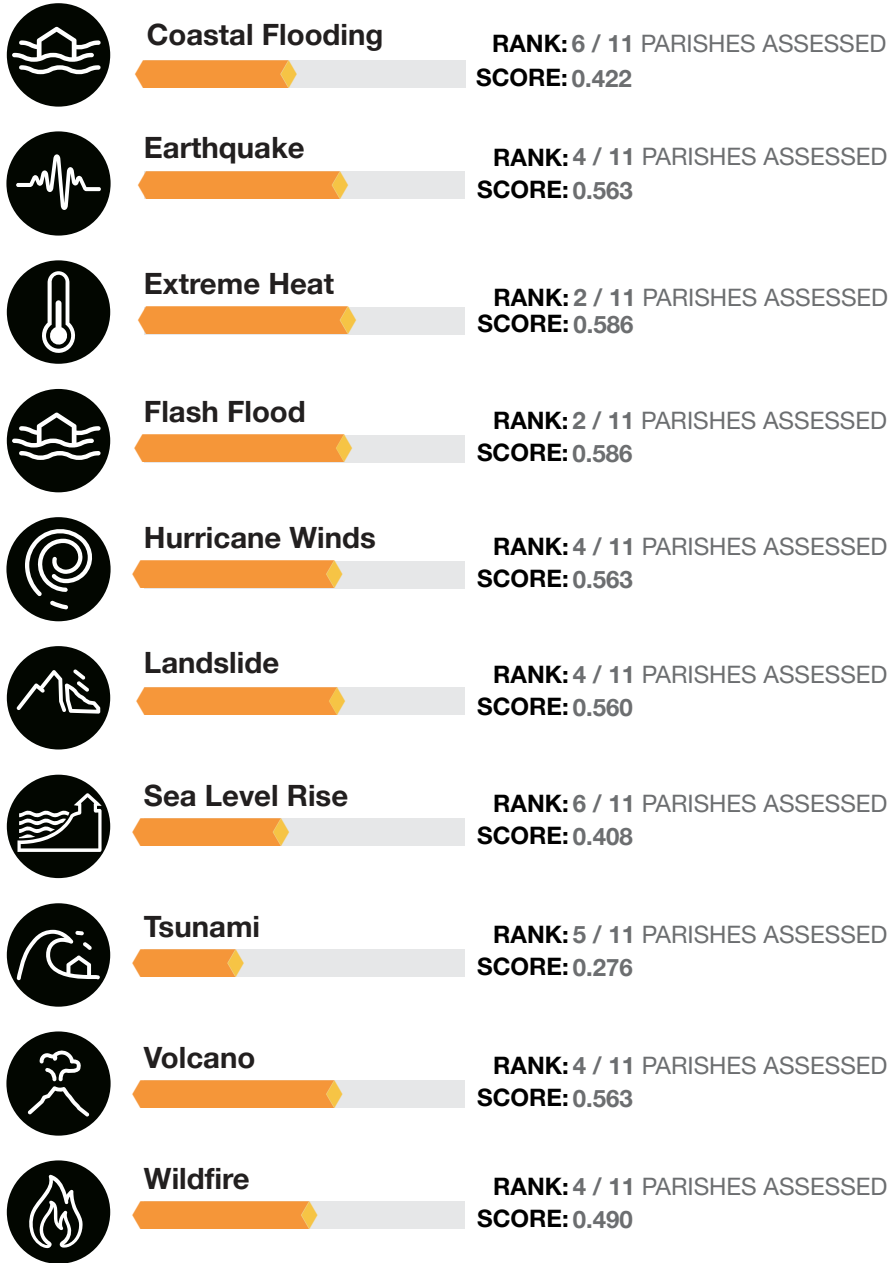


### Transportation Capacity

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)

2 / 11

RANK AMONG PARISHES  
Score: 0.573



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

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

PARISH SCORE  
COUNTRY SCORE



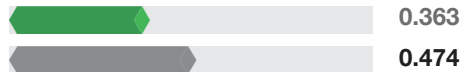
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity





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**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
--	---	---	--



### 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
--	------------------------------	-------------------------------------



### 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
--	------------------------------------



### 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
--	---



## 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
--	--	---



### 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
---	--





# 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)
--	---	---



## 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)
--	--



## 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)
---	---



## 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)
--	---



## 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.

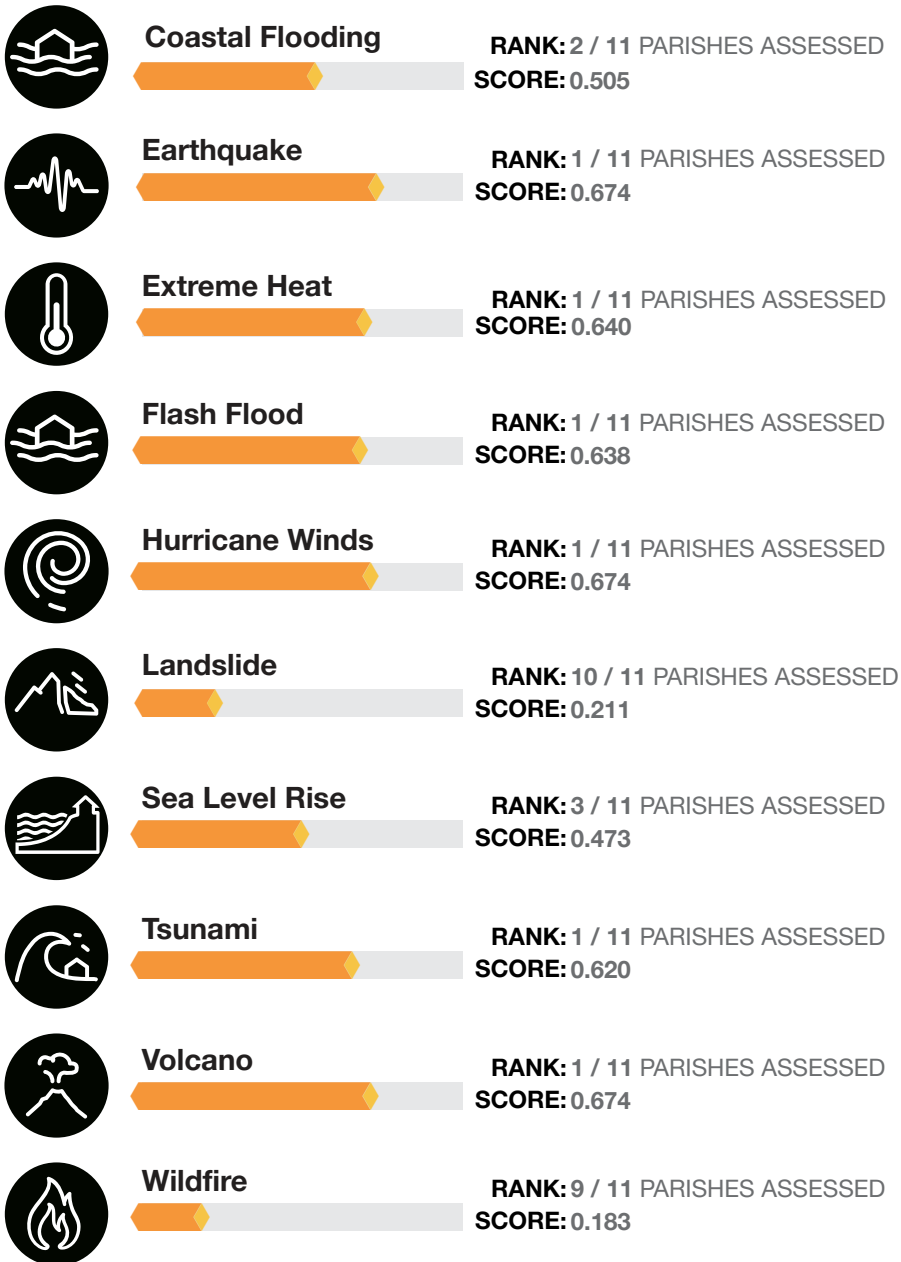


### Transportation Capacity

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  
COUNTRY SCORE



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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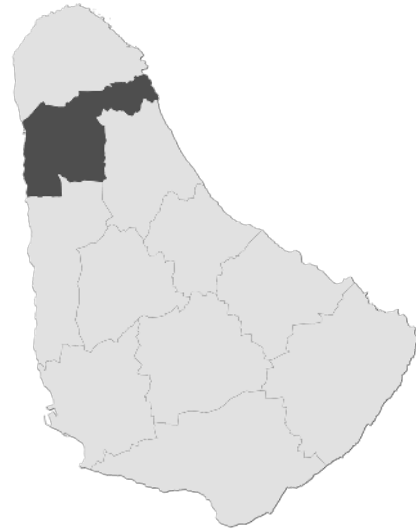
# **SAINT PETER**

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**NDPBA SUBNATIONAL PROFILE**

# BARBADOS SAINT PETER

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



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Low

Score: 0.433 • Rank: 7/11



### RESILIENCE (R)

- High

Score: 0.602 • Rank: 4/11



### MULTI-HAZARD EXPOSURE (MHE)

- High

Score: 0.503 • Rank: 4/11



### VULNERABILITY (V)

- Low

Score: 0.388 • Rank: 7/11



### COPING CAPACITY (CC)

- High

Score: 0.592 • Rank: 3/11



Population (2010 Census)

**10,382**



Population Density  
(persons per sq km)

**305**



Poverty Rate

**15.6%**



Housing Built Prior to  
1991

**59.7%**



Households with  
Unimproved Sanitation

**9.3%**





# MULTI-HAZARD EXPOSURE (MHE)

RANK: 4 / 11 PARISHES ASSESSED  
SCORE: 0.503



MHE  
0.503

Raw MHE  
0.181

Relative MHE  
0.824

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**2%**

👤 210

Buildings Exposed: **3%**

Critical Infrastructure Exposed: **26%**



Hurricane Winds

**100%**

👤 10,400

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

👤 10,400

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**13%**

👤 1,360

Buildings Exposed: **12%**

Critical Infrastructure Exposed: **10%**



Extreme Heat

**81%**

👤 8,420

Buildings Exposed: **81%**

Critical Infrastructure Exposed: **86%**



Sea Level Rise

**1%**

👤 129

Buildings Exposed: **2%**

Critical Infrastructure Exposed: **26%**



Flash Flood

**97%**

👤 10,100

Buildings Exposed: **97%**

Critical Infrastructure Exposed: **100%**



Tsunami

**2%**

👤 211

Buildings Exposed: **3%**

Critical Infrastructure Exposed: **28%**

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



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 4 / 11 PARISHES ASSESSED  
SCORE: 0.503

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



Volcanic Ashfall

**100%**

**10,400**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**7%**

**723**

Buildings Exposed: **4%**

Critical Infrastructure Exposed: **12%**



## VULNERABILITY (V)

**RANK: 7 / 11 PARISHES ASSESSED**  
**SCORE: 0.388**

Vulnerability in Saint Peter is primarily driven by Information Access Vulnerability and Gender Inequality. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.824** **RANK: 1/11 PARISHES ASSESSED**

<b>72.3%</b> Primary School Attendance Rate	<b>51.9%</b> Secondary School Attendance Rate	<b>77.8%</b> Household Access to Radio	<b>92.3%</b> Household Access to Television
--	---	---	--



### Economic Constraints

0  1 **SCORE: 0.101** **RANK: 11/11 PARISHES ASSESSED**

<b>0.45</b> Economic Dependency Ratio	<b>15.6%</b> Poverty Rate	<b>30.0%</b> GINI Coefficient
--	------------------------------	-------------------------------------



### Environmental Stress

0  1 **SCORE: 0.363** **RANK: 7/11 PARISHES ASSESSED**

<b>43.5%</b> Coastline Exposure to Local or Global Threats	<b>8.2%</b> Tree Cover Loss
--	-----------------------------------



### Gender Inequality

0  1 **SCORE: 0.515** **RANK: 4/11 PARISHES ASSESSED**

<b>0.13</b> Female to Male Labor Ratio	<b>0.08</b> Female to Male Secondary School Attendance
--	---



## VULNERABILITY (V)

RANK: 7 / 11 PARISHES ASSESSED  
SCORE: 0.388



### Housing and Transportation Vulnerability

0  1 SCORE: 0.424 RANK: 6/11 PARISHES ASSESSED

**59.7%**

Housing Built  
Prior to 1991

**16.9%**

Household  
Overcrowding

**41.6%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.393 RANK: 8/11 PARISHES ASSESSED

**4.5**

Prevalence of  
Disability (per  
100 persons)

**12.4%**

Population  
Age 65 and  
Over

**22.5%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.090 RANK: 9/11 PARISHES ASSESSED

**0.3%**

Average Annual  
Population  
Change

**305**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.396 RANK: 5/11 PARISHES ASSESSED

**92.1%**

Households  
with Piped  
Water

**9.3%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 2 / 11 PARISHES ASSESSED**  
**SCORE: 0.581**

Saint Peter 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: 0.371** **RANK: 2/11 PARISHES ASSESSED**

<b>23.6%</b> Croplands	<b>-1.2</b> Net Carbon Flux	<b>4.7%</b> Protected Area	<b>0%</b> Protected Coastlines
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### Infrastructure Capacity

0  1 **SCORE: 0.671** **RANK: 3/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.624** **RANK: 5/11 PARISHES ASSESSED**

<b>77.1%</b> Households with Fixed Phones	<b>55.1%</b> Households with Computer	<b>46.6%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.653** **RANK: 4/11 PARISHES ASSESSED**

<b>9.5</b> Average Distance to Fire Station (km)	<b>2.4</b> Average Distance to Hospital or Clinic (km)	<b>2.9</b> Average Distance to Police Station (km)	<b>1.2</b> Average Distance to Shelter (km)	<b>2.9</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.735** **RANK: 3/11 PARISHES ASSESSED**

<b>98.1%</b> Households with Electric Lighting	<b>93.3%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 2 / 11 PARISHES ASSESSED**  
**SCORE: 0.603**

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



### Maritime Logistics

0  1 **SCORE: 0.716** **RANK: 2/11 PARISHES ASSESSED**

<b>3.1</b> Average Distance to Seaport (km)	<b>212.7</b> Distance to External Medium or Large Seaport (km)	<b>0.12</b> Port Density (ports per km of coastline)
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### Air Support

0  1 **SCORE: 0.956** **RANK: 1/11 PARISHES ASSESSED**

<b>150.5</b> Distance to External C130 Airport (km)	<b>3.2</b> Average Distance to Airport or Heliport (km)
--	---



### Transportation Capacity

0  1 **SCORE: 0.486** **RANK: 3/11 PARISHES ASSESSED**

<b>0.29</b> Gas Stations per 1,000 Persons	<b>6.2</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.253** **RANK: 10/11 PARISHES ASSESSED**

<b>18.4</b> Average Distance to Warehouse (km)	<b>13.6</b> 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: 3 / 11** PARISHES ASSESSED  
**SCORE: 0.592**



## RESILIENCE (R)

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

**RANK: 4 / 11** PARISHES ASSESSED  
**SCORE: 0.602**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



### Information Access Vulnerability

Limitations in information access can impede a population's ability to receive, understand, and take action. Emergency messages must take into account the unique information access constraints of the region. Emergency messages presented to the population must contain clear and simple information to ensure an appropriate response to save lives and reduce losses.



### Gender Inequality

Marginalized populations are less likely to have their needs met under pre-disaster conditions, and therefore become even more susceptible to harm during times of disaster. Increase gender-based inclusion in all phases of DM, ensuring the implementation at subnational and local levels. Courses of action must recognize the role of women in society and support changes to policies and programs to promote gender-equal access.



### 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.



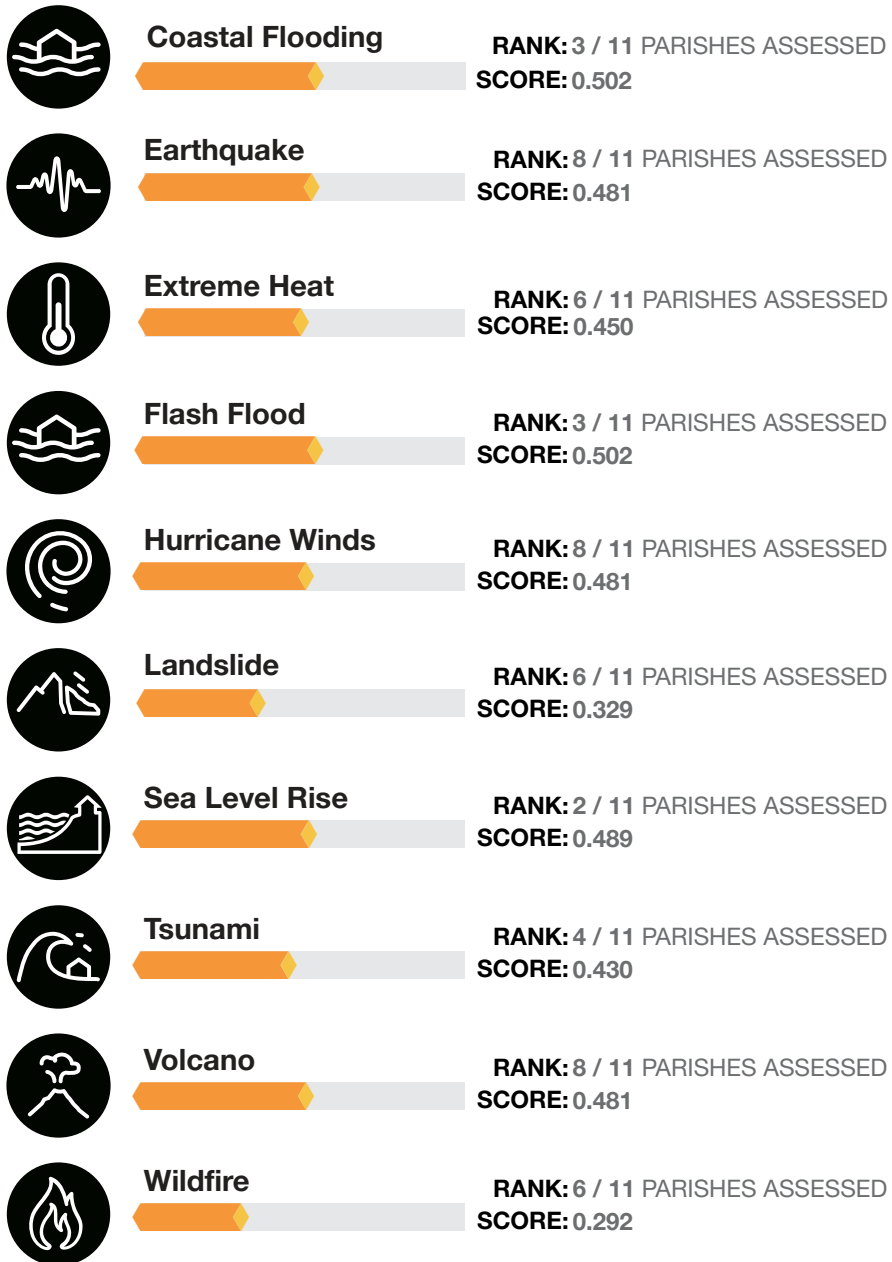
### Transportation Capacity

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)

7 / 11

RANK AMONG PARISHES  
Score: 0.433



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

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

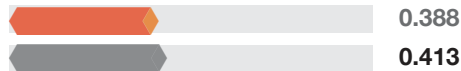
PARISH SCORE  
COUNTRY SCORE



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**BARBADOS**

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# **SAINT PHILIP**

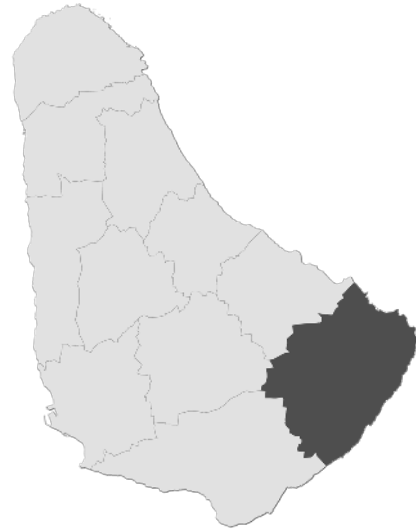
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**NDPBA SUBNATIONAL PROFILE**



# BARBADOS SAINT PHILIP

Area: 60 km<sup>2</sup>



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Low

Score: 0.415 • Rank: 8/11



### RESILIENCE (R)

- Moderate

Score: 0.601 • Rank: 5/11



### MULTI-HAZARD EXPOSURE (MHE)

- Moderate

Score: 0.447 • Rank: 5/11



### VULNERABILITY (V)

- Very Low

Score: 0.232 • Rank: 10/11



### COPING CAPACITY (CC)

- Low

Score: 0.434 • Rank: 7/11



Population (2010 Census)

**23,788**



Population Density  
(persons per sq km)

**396**



Poverty Rate

**12.6%**



Housing Built Prior to  
1991

**50.1%**



Households with  
Unimproved Sanitation

**6.3%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 5 / 11 PARISHES ASSESSED  
SCORE: 0.447



MHE  
0.447

Raw MHE  
0.337

Relative MHE  
0.557

## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**<1%**

**138**

Buildings Exposed: **<1%**  
Critical Infrastructure Exposed: **11%**



Hurricane Winds

**100%**

**37,600**

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



Earthquake

**100%**

**37,600**

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



Landslide

**6%**

**2,200**

Buildings Exposed: **6%**  
Critical Infrastructure Exposed: **12%**



Extreme Heat

**100%**

**37,600**

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



Sea Level Rise

**<1%**

**105**

Buildings Exposed: **<1%**  
Critical Infrastructure Exposed: **11%**



Flash Flood

**26%**

**9,930**

Buildings Exposed: **28%**  
Critical Infrastructure Exposed: **18%**



Tsunami

**<1%**

**2**

Buildings Exposed: **<1%**  
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: 5 / 11 PARISHES ASSESSED  
SCORE: 0.447

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



Volcanic Ashfall

**100%**

**37,600**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**19%**

**7,130**

Buildings Exposed: **19%**

Critical Infrastructure Exposed: **19%**



## VULNERABILITY (V)

**RANK: 10 / 11 PARISHES ASSESSED**  
**SCORE: 0.232**

Vulnerability in Saint Philip is primarily driven by Economic Constraints and Household Composition and Vulnerable Health. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.196** **RANK: 10/11 PARISHES ASSESSED**

**83.6%**

Primary School  
Attendance  
Rate

**55.1%**

Secondary  
School  
Attendance  
Rate

**81.8%**

Household  
Access to  
Radio

**94.8%**

Household  
Access to  
Television



### Economic Constraints

0  1 **SCORE: 0.453** **RANK: 5/11 PARISHES ASSESSED**

**0.47**

Economic  
Dependency  
Ratio

**12.6%**

Poverty Rate

**34.5%**

GINI  
Coefficient



### Environmental Stress

0  1 **SCORE: 0.211** **RANK: 10/11 PARISHES ASSESSED**

**40.5%**

Coastline  
Exposure to  
Local or Global  
Threats

**4.9%**

Tree Cover  
Loss



### Gender Inequality

0  1 **SCORE: 0.054** **RANK: 11/11 PARISHES ASSESSED**

**0.09**

Female to Male  
Labor Ratio

**0.02**

Female  
to Male  
Secondary  
School  
Attendance





## VULNERABILITY (V)

RANK: 10 / 11 PARISHES ASSESSED  
SCORE: 0.232



### Housing and Transportation Vulnerability

0  1 SCORE: 0.161 RANK: 11/11 PARISHES ASSESSED

**50.1%**

Housing Built  
Prior to 1991

**16.3%**

Household  
Overcrowding

**36.0%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.444 RANK: 6/11 PARISHES ASSESSED

**3.7**

Prevalence of  
Disability (per  
100 persons)

**11.2%**

Population  
Age 65 and  
Over

**24.8%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.153 RANK: 7/11 PARISHES ASSESSED

**0.5%**

Average Annual  
Population  
Change

**396**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.184 RANK: 9/11 PARISHES ASSESSED

**94.4%**

Households  
with Piped  
Water

**6.3%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 7 / 11 PARISHES ASSESSED**  
**SCORE: 0.516**

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



### Environmental Capacity

0  1 **SCORE: 0.203** **RANK: 8/11 PARISHES ASSESSED**

<b>35.1%</b> Croplands	<b>-0.2</b> Net Carbon Flux	<b>0.0%</b> Protected Area	<b>0%</b> Protected Coastlines
---------------------------	--------------------------------	-------------------------------	-----------------------------------



### Infrastructure Capacity

0  1 **SCORE: 0.651** **RANK: 5/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.777** **RANK: 3/11 PARISHES ASSESSED**

<b>77.0%</b> Households with Fixed Phones	<b>61.4%</b> Households with Computer	<b>51.5%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.491** **RANK: 6/11 PARISHES ASSESSED**

<b>6.2</b> Average Distance to Fire Station (km)	<b>2.3</b> Average Distance to Hospital or Clinic (km)	<b>4.6</b> Average Distance to Police Station (km)	<b>1.2</b> Average Distance to Shelter (km)	<b>0.8</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.684** **RANK: 7/11 PARISHES ASSESSED**

<b>98.1%</b> Households with Electric Lighting	<b>92.7%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 9 / 11 PARISHES ASSESSED**  
**SCORE: 0.352**

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



### Maritime Logistics

0  1 **SCORE: 0.223** **RANK: 10/11 PARISHES ASSESSED**

<b>5.7</b> Average Distance to Seaport (km)	<b>233.4</b> Distance to External Medium or Large Seaport (km)	<b>0.05</b> Port Density (ports per km of coastline)
--	---	---



### Air Support

0  1 **SCORE: 0.311** **RANK: 9/11 PARISHES ASSESSED**

<b>170.1</b> Distance to External C130 Airport (km)	<b>6.9</b> Average Distance to Airport or Heliport (km)
--	---



### Transportation Capacity

0  1 **SCORE: 0.272** **RANK: 8/11 PARISHES ASSESSED**

<b>0.05</b> Gas Stations per 1,000 Persons	<b>7.2</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.603** **RANK: 6/11 PARISHES ASSESSED**

<b>17.8</b> Average Distance to Warehouse (km)	<b>1.3</b> 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: 7 / 11** PARISHES ASSESSED  
**SCORE: 0.434**



## RESILIENCE (R)

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

**RANK: 5 / 11** PARISHES ASSESSED  
**SCORE: 0.601**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



### Economic Constraints

Economic constraints have individual, household, community, and region-wide influence. Limitations on available financial resources reduce opportunities to invest in mitigation and preparedness measures and limit the ability to facilitate short- and long-term recovery.



### Household Composition and Vulnerable Health

Households with dependent populations, such as the very young, elderly and the disabled may have more difficulty with mobilizing and evacuating in a timely fashion and therefore become even more susceptible to harm during times of disaster. Further, the deaf or hard of hearing may not hear audible hazard alerts. Once evacuated, these populations will require additional services and care considerations in the response aftermath and during recovery. Plans and strategies must consider the special accommodations for these populations during response and recovery, including evacuation and sheltering.



### 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.

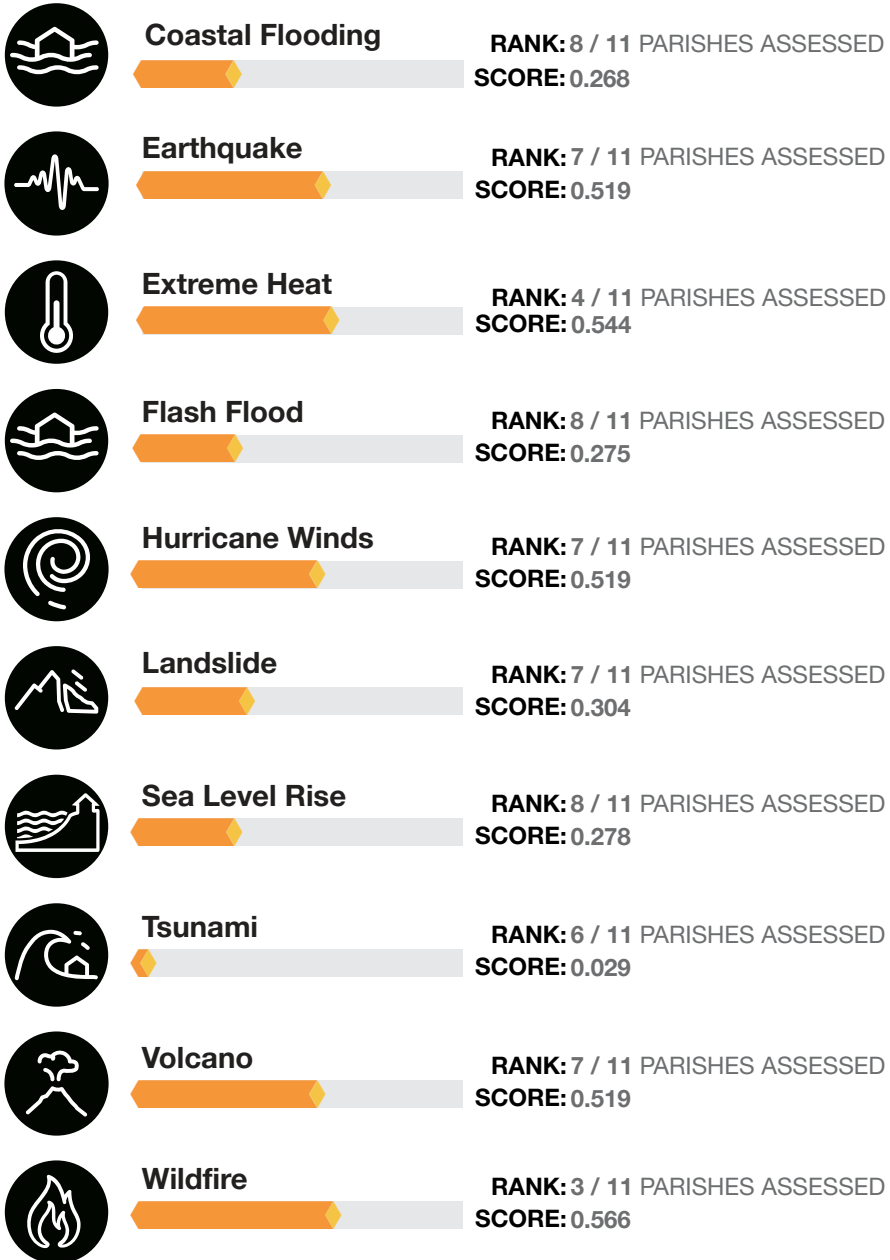


### Transportation Capacity

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)

**8 / 11**

RANK AMONG PARISHES  
Score: 0.415



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

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

PARISH SCORE  
COUNTRY SCORE



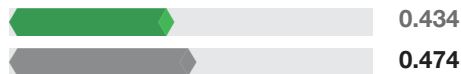
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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**SAINT THOMAS**

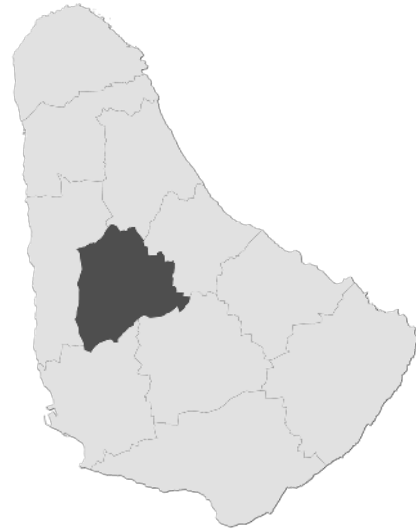
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**NDPBA SUBNATIONAL PROFILE**



# BARBADOS SAINT THOMAS

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



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR)

- Very Low  
Score: 0.303 • Rank: 10/11



### RESILIENCE (R)

- Very High  
Score: 0.636 • Rank: 2/11



### MULTI-HAZARD EXPOSURE (MHE)

- Very Low  
Score: 0.180 • Rank: 10/11



### VULNERABILITY (V)

- Very Low  
Score: 0.225 • Rank: 11/11



### COPING CAPACITY (CC)

- Moderate  
Score: 0.496 • Rank: 5/11



Population (2010 Census)

**12,035**



Population Density  
(persons per sq km)

**354**



Poverty Rate

**15.9%**



Housing Built Prior to  
1991

**51.8%**



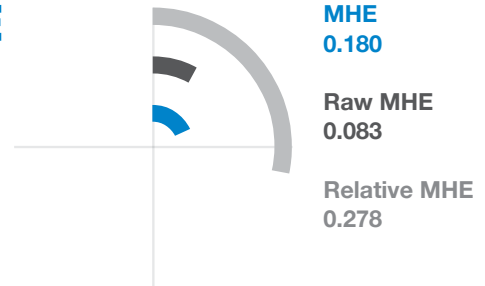
Households with  
Unimproved Sanitation

**9.5%**



# MULTI-HAZARD EXPOSURE (MHE)

RANK: 10 / 11 PARISHES ASSESSED  
SCORE: 0.180



## ESTIMATED EXPOSURE TO EACH HAZARD:



Coastal Flooding

**0%**

0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Hurricane Winds

**100%**

16,600

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Earthquake

**100%**

16,600

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Landslide

**11%**

1,850

Buildings Exposed: **12%**

Critical Infrastructure Exposed: **0%**



Extreme Heat

**44%**

7,320

Buildings Exposed: **40%**

Critical Infrastructure Exposed: **66%**



Sea Level Rise

**0%**

0

Buildings Exposed: **0%**

Critical Infrastructure Exposed: **0%**



Flash Flood

**9%**

1,480

Buildings Exposed: **9%**

Critical Infrastructure Exposed: **10%**



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: 10 / 11 PARISHES ASSESSED  
SCORE: 0.180

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



Volcanic Ashfall

**100%**

**16,600**

Buildings Exposed: **100%**

Critical Infrastructure Exposed: **100%**



Wildfire

**16%**

**2,610**

Buildings Exposed: **15%**

Critical Infrastructure Exposed: **23%**



## VULNERABILITY (V)

**RANK: 11 / 11 PARISHES ASSESSED**  
**SCORE: 0.225**

Vulnerability in Saint Thomas is primarily driven by Clean Water Access Vulnerability and Household Composition and Vulnerable Health. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



### Information Access Vulnerability

0  1 **SCORE: 0.285** **RANK: 8/11 PARISHES ASSESSED**

**82.7%**

Primary School  
Attendance  
Rate

**55.4%**

Secondary  
School  
Attendance  
Rate

**81.6%**

Household  
Access to  
Radio

**93.1%**

Household  
Access to  
Television



### Economic Constraints

0  1 **SCORE: 0.274** **RANK: 9/11 PARISHES ASSESSED**

**0.46**

Economic  
Dependency  
Ratio

**15.9%**

Poverty Rate

**31.5%**

GINI  
Coefficient



### Environmental Stress

0  1 **SCORE: 0.234** **RANK: 9/11 PARISHES ASSESSED**

**No Data**

Coastline  
Exposure to  
Local or Global  
Threats

**6.5%**

Tree Cover  
Loss



### Gender Inequality

0  1 **SCORE: 0.061** **RANK: 10/11 PARISHES ASSESSED**

**0.10**

Female to Male  
Labor Ratio

**0.00**

Female  
to Male  
Secondary  
School  
Attendance



## VULNERABILITY (V)

RANK: 11 / 11 PARISHES ASSESSED  
SCORE: 0.225



### Housing and Transportation Vulnerability

0  1 SCORE: 0.224 RANK: 9/11 PARISHES ASSESSED

**51.8%**

Housing Built  
Prior to 1991

**16.9%**

Household  
Overcrowding

**36.5%**

Households  
without a  
Private Vehicle



### Household Composition and Vulnerable Health

0  1 SCORE: 0.290 RANK: 11/11 PARISHES ASSESSED

**2.8**

Prevalence of  
Disability (per  
100 persons)

**10.4%**

Population  
Age 65 and  
Over

**25.2%**

Population  
Under Age 18



### Population Pressures

0  1 SCORE: 0.103 RANK: 8/11 PARISHES ASSESSED

**0.3%**

Average Annual  
Population  
Change

**354**

Population  
Density  
(persons per  
sq km)



### Clean Water Access Vulnerability

0  1 SCORE: 0.332 RANK: 6/11 PARISHES ASSESSED

**93.6%**

Households  
with Piped  
Water

**9.5%**

Households  
with  
Unimproved  
Sanitation



## ISLAND CAPACITY (IC)

**RANK: 5 / 11 PARISHES ASSESSED**  
**SCORE: 0.544**

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



### Environmental Capacity

0  1 **SCORE: 0.321** **RANK: 5/11 PARISHES ASSESSED**

<b>11.9%</b> Croplands	<b>-1.4</b> Net Carbon Flux	<b>2.5%</b> Protected Area	<b>No Data</b> Protected Coastlines
---------------------------	--------------------------------	-------------------------------	--



### Infrastructure Capacity

0  1 **SCORE: 0.640** **RANK: 6/11 PARISHES ASSESSED**



### Communications Capacity

0  1 **SCORE: 0.685** **RANK: 4/11 PARISHES ASSESSED**

<b>75.2%</b> Households with Fixed Phones	<b>60.5%</b> Households with Computer	<b>49.9%</b> Households with Internet Access
--	--	---



### Emergency Services and Health Care Capacity

0  1 **SCORE: 0.745** **RANK: 2/11 PARISHES ASSESSED**

<b>3.4</b> Average Distance to Fire Station (km)	<b>1.8</b> Average Distance to Hospital or Clinic (km)	<b>2.3</b> Average Distance to Police Station (km)	<b>1.0</b> Average Distance to Shelter (km)	<b>1.2</b> Hospitals and Clinics per 10,000 Persons
---	---	---	--	--



### Energy Capacity

0  1 **SCORE: 0.490** **RANK: 9/11 PARISHES ASSESSED**

<b>97.6%</b> Households with Electric Lighting	<b>91.1%</b> Households Using Gas for Cooking
---	--



## LOGISTICS CAPACITY (LC)

**RANK: 5 / 11 PARISHES ASSESSED**  
**SCORE: 0.449**

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



### Maritime Logistics

0  1 **SCORE: 0.365** **RANK: 7/11 PARISHES ASSESSED**

<b>7.8</b> Average Distance to Seaport (km)	<b>220.6</b> Distance to External Medium or Large Seaport (km)	<b>No Data</b> Port Density (ports per km of coastline)
--	---	--



### Air Support

0  1 **SCORE: 0.542** **RANK: 7/11 PARISHES ASSESSED**

<b>156.5</b> Distance to External C130 Airport (km)	<b>8.6</b> Average Distance to Airport or Heliport (km)
--	--



### Transportation Capacity

0  1 **SCORE: 0.146** **RANK: 10/11 PARISHES ASSESSED**

<b>0.00</b> Gas Stations per 1,000 Persons	<b>6.0</b> Road Density (km of roads per sq km)
---	--



### Warehouse Access

0  1 **SCORE: 0.741** **RANK: 4/11 PARISHES ASSESSED**

<b>8.5</b> Average Distance to Warehouse (km)	<b>4.6</b> 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: 5 / 11** PARISHES ASSESSED  
**SCORE: 0.496**



## RESILIENCE (R)

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

**RANK: 2 / 11** PARISHES ASSESSED  
**SCORE: 0.636**

## KEY FACTORS INFLUENCING RESILIENCE

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

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



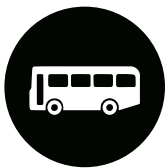
### Clean Water Access Vulnerability

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.



### Household Composition and Vulnerable Health

Households with dependent populations, such as the very young, elderly and the disabled may have more difficulty with mobilizing and evacuating in a timely fashion and therefore become even more susceptible to harm during times of disaster. Further, the deaf or hard of hearing may not hear audible hazard alerts. Once evacuated, these populations will require additional services and care considerations in the response aftermath and during recovery. Plans and strategies must consider the special accommodations for these populations during response and recovery, including evacuation and sheltering.



### 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.

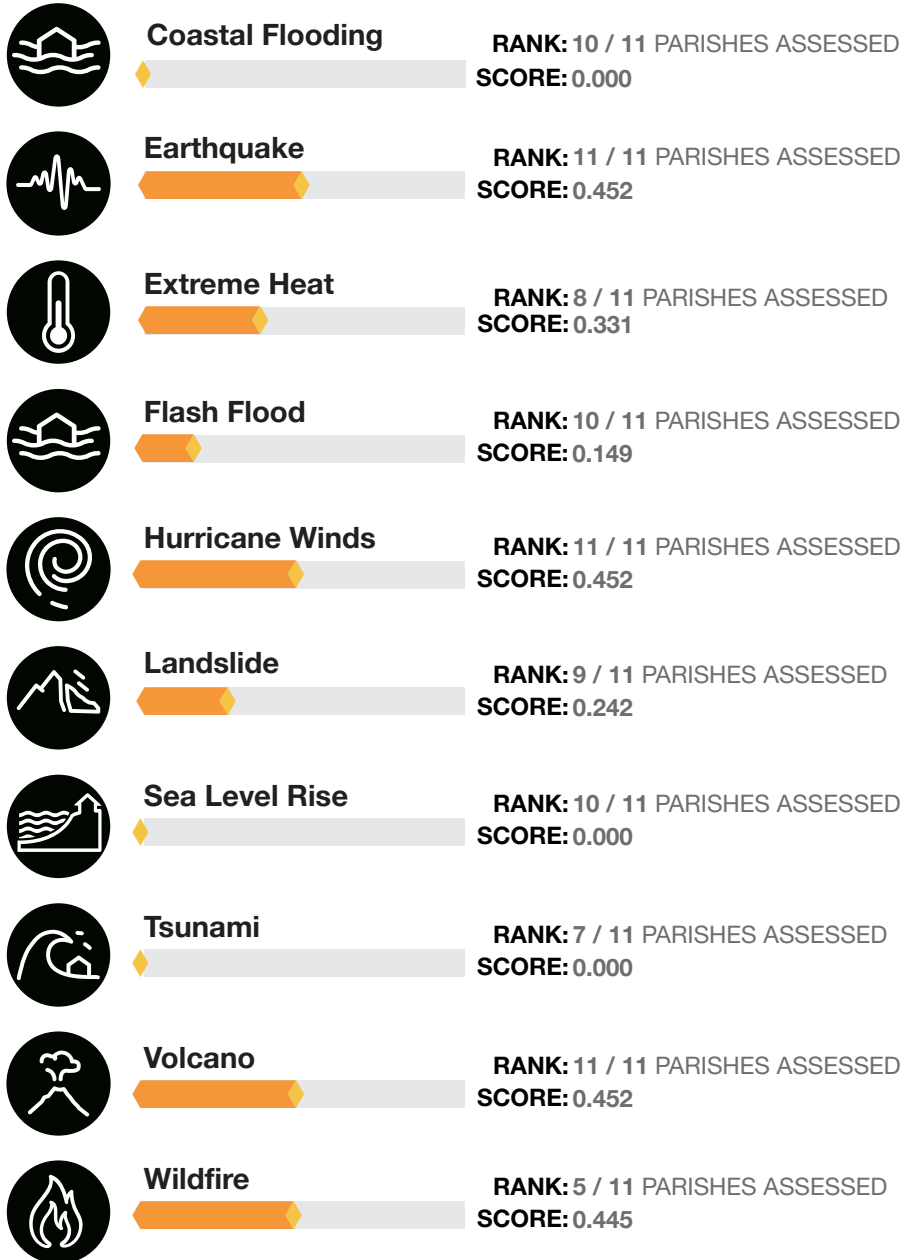


### Maritime Logistics

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.



## HAZARD-SPECIFIC RISK (HSR)

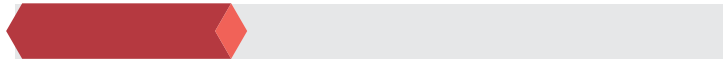




## MULTI-HAZARD RISK (MHR)

**10 / 11**

RANK AMONG PARISHES  
Score: 0.303



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

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

PARISH SCORE  
COUNTRY SCORE



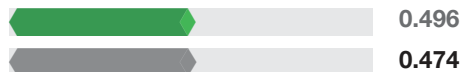
#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity



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