

**Better solutions.  
Fewer disasters.  
Safer world.**

A photograph of a large, conical volcano with a white plume of smoke or ash rising from its peak. The volcano is set against a bright blue sky with scattered white clouds. In the foreground, there is a dark, sandy beach that curves along the edge of a body of water. The water is dark and calm, reflecting the sky. The background is filled with lush green trees and vegetation.

# **Región Autónoma de la Costa Caribe Sur (RAAS)**

**Nicaragua National Disaster Preparedness Baseline Assessment  
Department Profile**

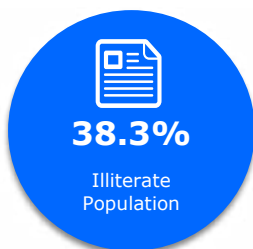
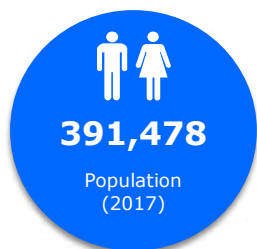
## Department: Región Autónoma de la Costa Caribe Sur (RAAS)



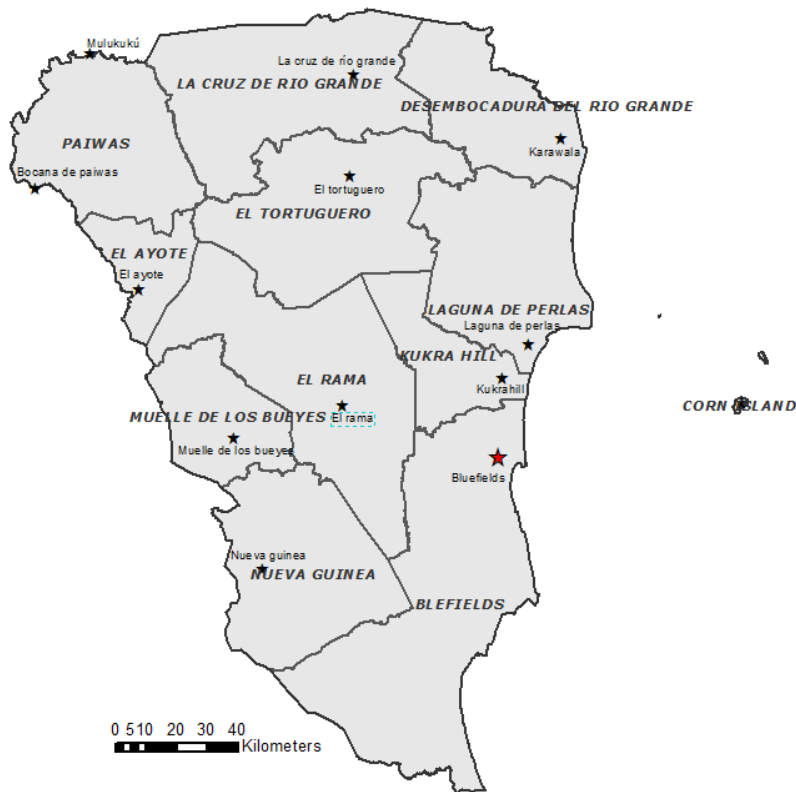
Department Capital: Bluefields

Area: 27,546 km<sup>2</sup>

Región Autónoma de la Costa Caribe Sur is the second largest territory in Nicaragua, located in the southeast of the country. It is primarily known for the Corn Islands, nature reserves, and its May Pole festivities.



Municipality	Population
Paiwas	36,085
La Cruz de Río Grande	38,639
Desembocadura de Río Grande	3,938
Laguna de Perlas	17,468
El Tortuguero	49,627
El Rama	58,331
El Ayote	17,535
Muelle de los Bueyes	24,251
Kukrahill	9,737
Corn Island	7,515
Bluefields	49,719
Nueva Guinea	78,633



**Multi-Hazard Risk Rank:  
Very High (2 of 17)**

**Lack of Resilience Rank:  
Very High (2 of 17)**

### RVA Component Scores

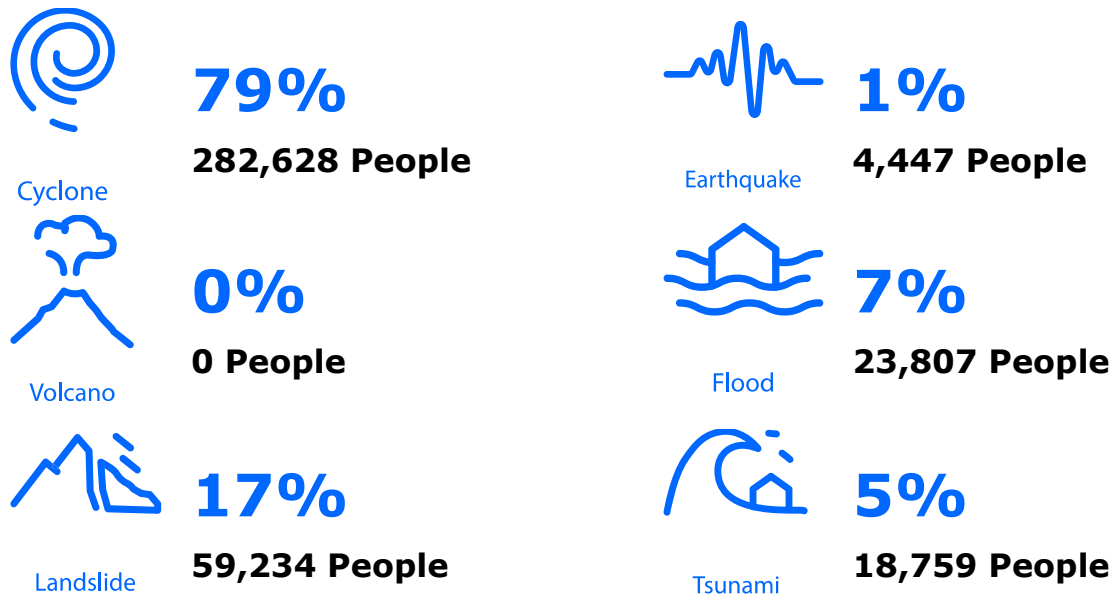
Table 1. Department scores and ranks (compared across departments) for each index

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		Very High		Low		Very High		Very Low	
Score	Rank (of 17)	Score	Rank (of 17)	Score	Rank (of 17)	Score	Rank (of 17)	Score	Rank (of 17)
0.575	2	0.724	2	0.275	11	0.705	3	0.256	16

## Multi-Hazard Exposure (MHE)

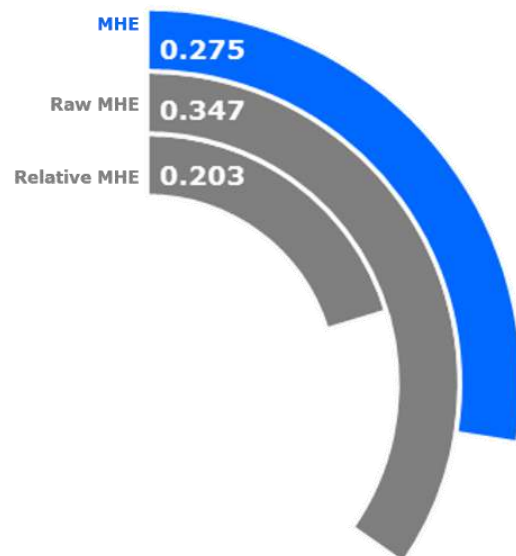
**Multi-Hazard Exposure<sup>1</sup> Rank: 11 of 17 Departments (Score: 0.275)**

Table 2. Estimated ambient population<sup>2</sup> exposed to each hazard



### Response: Hurricane Otto

Hurricane Otto made landfall in southern Nicaragua on November 24, 2016, as a Category 2 major hurricane. RAAS's response to Hurricane Otto allowed for the identification of disaster-management strengths and challenges for the region. Twenty-four hours before landfall, the at-risk population was evacuated without incident. SINAPRED attributed the calm, orderly response from residents to the frequency of drills and exercises conducted at both the national and subnational levels, as well as the practice of including communities in their own disaster preparedness measures. No lives were lost to Hurricane Otto in Nicaragua. However, it was noted that a lack of resources was evident for managing the overall response in RAAS.



<sup>1</sup> Multi-Hazard Exposure: Average exposure of the population to hazards.

<sup>2</sup> Ambient Population: 24-hour average estimate of the population in each department. Ambient population typically differs from census population.

## Vulnerability (V)

### Vulnerability<sup>3</sup> Rank: 3 of 17 Departments

(Score: 0.705) Vulnerability in Región

Autónoma de la Costa Caribe Sur is primarily driven by very high Gender Inequality, Economic Constraints, Vulnerable Health Status, and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

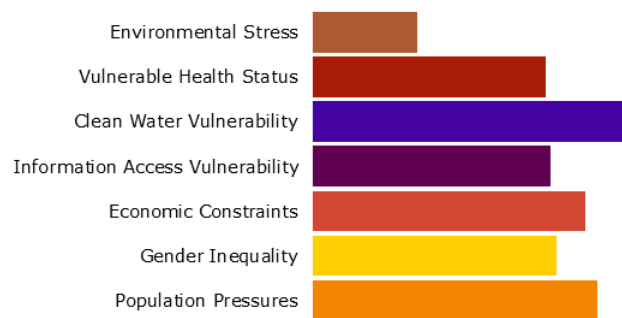









Table 3. Component scores for each vulnerability sub-component

	<b>Environmental Stress</b>	<b>0%</b> Province at Drought Risk	<b>14.7%</b> Erosion Risk	<b>101.3</b> Livestock per km <sup>2</sup>			
	<b>Vulnerable Health Status</b>	<b>14.4</b> Infant Mortality Rate	<b>125.1</b> Maternal Mortality Rate	<b>67.4</b> Average Life Expectancy	<b>2%</b> Acute Malnutrition (Children < 5)	<b>2.2%</b> Population Disabled	
	<b>Clean Water Vulnerability</b>	<b>14.3%</b> Households with Access to Improved Water	<b>13.7%</b> Households with Access to Flush Toilets				
	<b>Information Access Vulnerability</b>	<b>38.3%</b> Illiteracy	<b>4.3 yrs</b> Average Years of Schooling	<b>82.1%</b> Primary School Enrollment	<b>96.5%</b> Households without Internet	<b>49.5%</b> Households without TV	<b>35.7%</b> Households without Radio
	<b>Economic Constraints</b>	<b>68.1</b> Economic Dependency Ratio	<b>89.5%</b> Population in Poverty				
	<b>Gender Inequality</b>	<b>25%</b> Female Seats in Government	<b>1.37</b> Female to Male Secondary Education Enrollment	<b>0.62</b> Female to Male Labor Ratio			
	<b>Population Pressures</b>	<b>2.56%</b> Average Annual Population Change	<b>4.53%</b> Average Annual Urban Population Change				

<sup>3</sup> Vulnerability: The socioeconomic conditions that are associated with the susceptibility to disruptions in a country's normal functions.

## Coping Capacity (CC)

### Coping Capacity<sup>4</sup> Rank: 16 of 17 Departments (Score: 0.256)

Región Autónoma de la Costa Caribe Sur exhibits weaker Coping Capacity in the areas of Infrastructure, Economic Capacity, and Governance. The bar chart on the right indicates the socioeconomic themes contributing to the department’s overall Coping Capacity score.

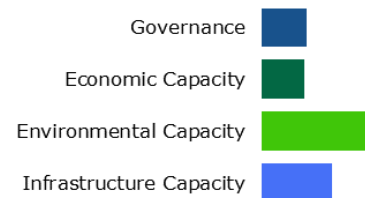


Table 4. Component scores for each coping capacity sub-component

	<b>Economic Capacity</b>	<b>5.1%</b> Households that Receive Remittances	<b>85.4%</b> Employment Rate (Male)	<b>32.5%</b> Employment Rate (Female)	<b>7.2%</b> Population in Highest Welfare Quintile	<b>\$248.3</b> Annual Nominal Global Revenue per Capita	
	<b>Governance</b>	<b>85.4%</b> Crime Complaints Cleared	<b>1305.6</b> Crime Rate per 100k Persons	<b>84.7%</b> Households without Garbage Collection	<b>17.4%</b> Voter Participation (2016 Election)		
	<b>Environmental Capacity</b>	<b>28.9%</b> Protected or Reforested Land					
	<b>Infrastructure Capacity</b>						
	<b>Health Care Capacity</b>		<b>6.7</b> Hospital Beds per 10,000 Persons	<b>13.8</b> Nurses per 10,000 Persons	<b>8.7</b> Physicians per 10,000 Persons	<b>41.2 km</b> Average Distance to Nearest Hospital	<b>75%</b> Children Completed Immunization Schedule
	<b>Communications Capacity</b>		<b>5.2%</b> Households with Access to Fixed Phone Line	<b>74.7%</b> Households with Access to Mobile Phone			
	<b>Transportation Capacity</b>		<b>60.8 km</b> Average Distance to Nearest Port or Airport	<b>0.05 km</b> Total Length of Road per km <sup>2</sup> (area)			

<sup>4</sup> Coping Capacity: The systems, means, and abilities of a country to absorb and respond to events that could potentially disrupt normal function.

## Lack of Resilience (LR)

**Lack of Resilience<sup>5</sup> Rank: 2 of 17 Departments (Score: 0.724)**

Región Autónoma de la Costa Caribe Sur's score and ranking are due to very high Vulnerability combined with very low Coping Capacity scores.

Table 5. The three thematic areas with the weakest relative scores



**Clean Water  
Vulnerability**



**Governance**



**Population  
Pressures**

## Multi-Hazard Risk (MHR)

**Multi-Hazard Risk<sup>6</sup> Rank: 2 of 17 Departments (Score: 0.575)**

Región Autónoma de la Costa Caribe Sur's score and ranking are due to low Multi-Hazard Exposure combined with very high Vulnerability and very low Coping Capacity scores.

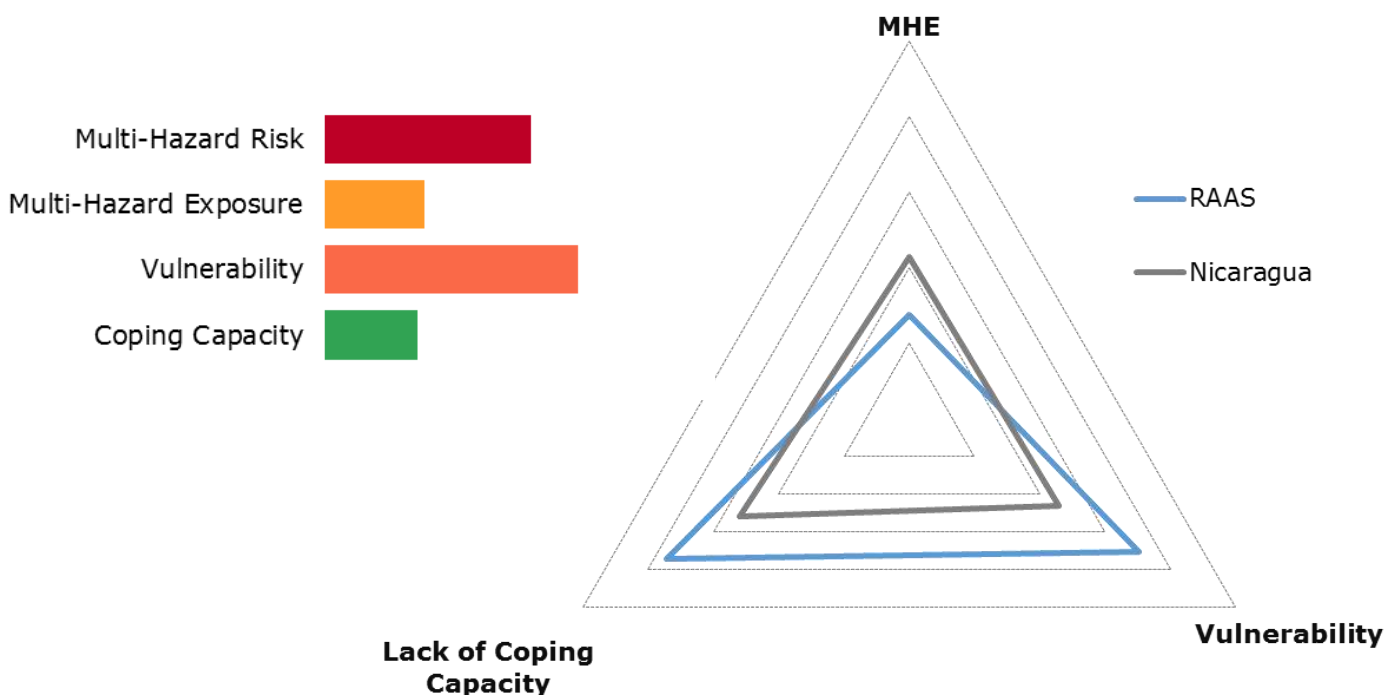


Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

<sup>5</sup> **Lack of Resilience:** The susceptibility to impact from the short-term inability to absorb, respond to, and recover from disruptions to a country's normal function. This index provides a hazard-independent look at current socioeconomic conditions.

<sup>6</sup> **Multi-Hazard Risk:** The likelihood of losses or disruptions to a country's normal function due to interaction between multi-hazard exposure, socioeconomic vulnerability, and coping capacity.

## Successes



### **Responsive population**

Engage with drills and exercises, and willing to evacuate to promote a successful response.



### **Low environmental stress**

Ranked 13 of 17 departments, low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.

## Recommendations

**01**

### **Resource assessment**

Conduct an assessment to document and track subnational disaster management resources, including facilities (e.g., EOCs and command posts, warehouses) and equipment critical to disaster management activities to enhance understanding of capabilities and needs, justify budget increases, and inform contingency planning for the territories.

**02**

### **Reduce clean water vulnerability**

Similar to RAAN, invest in public water and sewer infrastructure to ensure equitable access to safe, clean drinking water and sanitation.

**03**

### **Improve governance**

Provide additional support for local police, firefighters, and emergency medical resources to improve public safety and increase crime-clearance rates. In addition, promote civic engagement and voter participation in local and national elections to improve public voice and accountability. Finally, seek partnerships with the private sector to increase the provision of services, such as garbage collection.



# Better solutions. Fewer disasters. Safer world.

NDPBA Nicaragua Report  
1305 N. Holocono Street, Suite 2  
Kihei, Hawaii, 96753  
Phone: (808) 891-0525 | Fax: (808) 891-0526  
[ndpba@pdc.org](mailto:ndpba@pdc.org) | [www.pdc.org](http://www.pdc.org)

© 2018 Pacific Disaster Center