

Better solutions.  
Fewer disasters.  
Safer world.



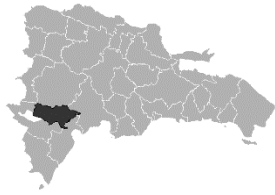
# Baoruco

Dominican Republic National Disaster Preparedness  
Baseline Assessment  
Province Profile

## Findings: Risk and Vulnerability Assessment (RVA)

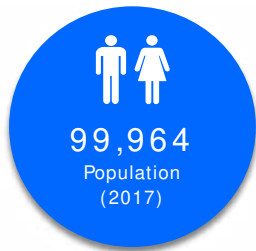
### Province: Baoruco

Province Capital: Neiba

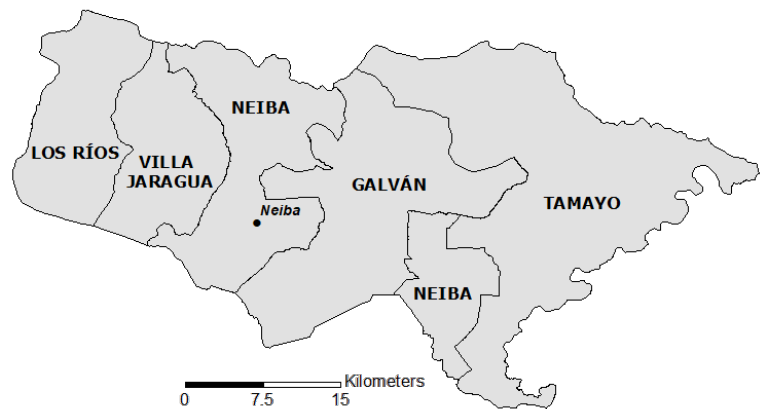


Area: 1,435 km<sup>2</sup>

Baoruco province is located in the *Hoya de Enriquillo* valley, a dry valley with some parts below sea level. Baoruco is an important area for the extraction and commercialization of the larimar gemstone.



Municipality	Population
Neiba	37,508
Galván	16,129
Tamayo	27,501
Villa Jaragua	10,907
Los Ríos	7,919



**Multi-Hazard Risk Rank:  
Very High (4 of 32)**

**Lack of Resilience Rank:  
Very High (2 of 32)**

## RVA Component Scores

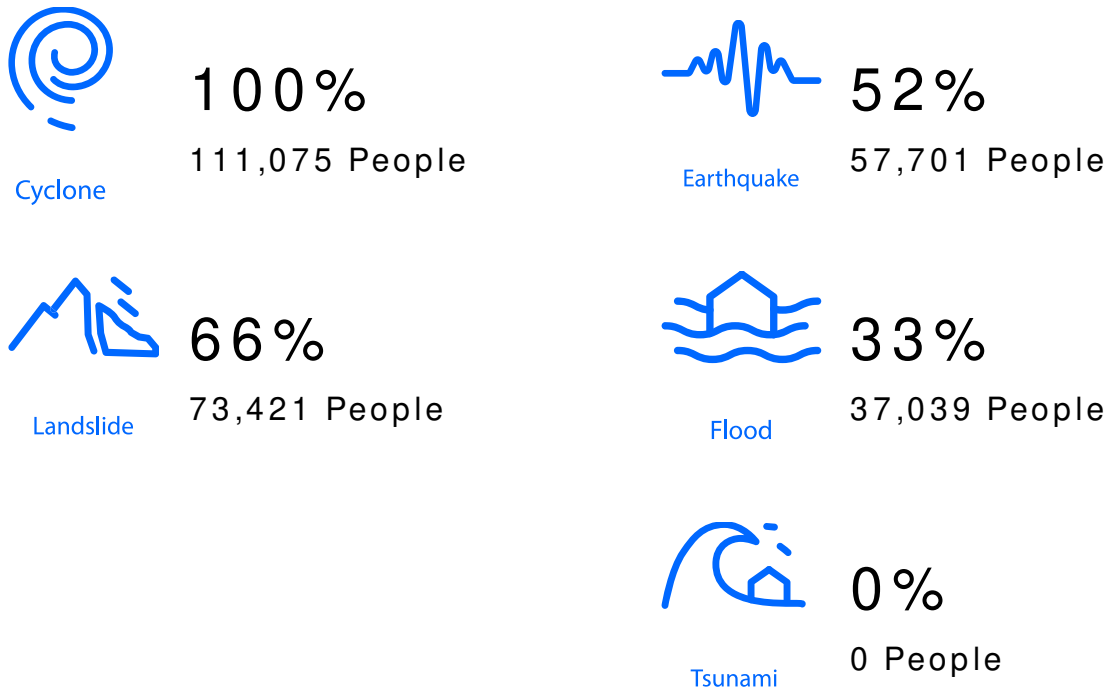
Table 1. Province Scores and Ranks (compared across Provinces) for each Index

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		Very High		Low		Very High		Very Low	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.563	4	0.653	2	0.382	24	0.655	1	0.349	30

## Multi-Hazard Exposure (MHE)

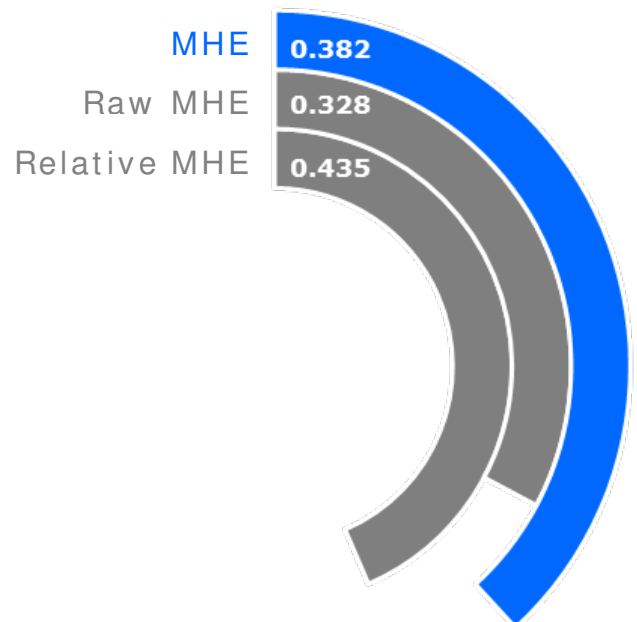
Multi-Hazard Exposure<sup>1</sup> Rank: 24 of 32 Provinces (Score: 0.382)

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



### Case Study: Disaster Impacts and Vulnerable Populations

After the passage of Tropical Storm Noel in October 2007, UNFPA and UN-INSTRAW partnered to conduct an evaluation on the impacts of disasters on vulnerable persons in the Dominican Republic. The province of Baoruco was included in the evaluation, as it was one of the regions most affected by the storm in terms of affected homes and number of displaced persons. Baoruco's high rate of extreme poverty significantly impacted its capacity to prepare for and respond to Tropical Storm Noel, exposing its vulnerable persons to increased instances of violence and traumatic stress. The UN agencies proposed a series of recommendations to improve security and enhance the safety of vulnerable persons in the province.



<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 province. Ambient population typically differs from census population.

## Findings: Risk and Vulnerability Assessment (RVA)

### Vulnerability (V)

Vulnerability<sup>3</sup> Rank: 1 of 32 Provinces (Score: 0.655) Vulnerability in Baoruco is primarily influenced by Vulnerable Health Status, Economic Constraints, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

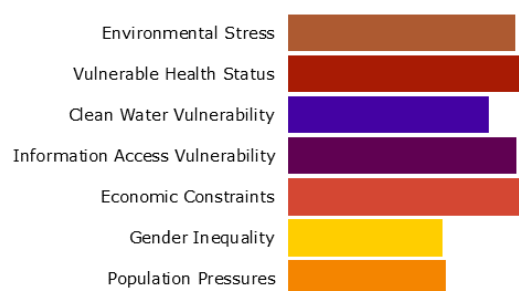









Table 3. Component Scores for each Vulnerability Sub-component

	<b>Environmental Stress</b>	100% Province Susceptible to Drought	-0.6% Average Annual Forest Change				
	<b>Vulnerable Health Status</b>	15.6 Infant Mortality Rate	294.7 Maternal Mortality Rate	18.3 Chronic Malnutrition	8.4% Population Disabled		
	<b>Clean Water Vulnerability</b>	14.0% Households without Access to Improved Water	25.3% Households without Access to Flush Toilets				
	<b>Information Access Vulnerability</b>	24.9% Illiteracy	86.5% Primary School Enrollment	97.1% Households without Internet	38.5% Households without TV	66.1% Households without Radio	5.0 Average years of Schooling
	<b>Economic Constraints</b>	72.6 Economic Dependency Ratio	74.5% Population in Poverty	40.5% CEP Beneficiaries			
	<b>Gender Inequality</b>	41.4% Female Seats in Government	1.1 Female to Male Years of Schooling	0.52 Female to Male Labor Ratio			
	<b>Population Pressures</b>	0.33% Average Annual Population Change	5.0% 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.

## Findings: Risk and Vulnerability Assessment (RVA)

### Coping Capacity (CC)

Coping Capacity<sup>4</sup> Rank: 30 of 32 Provinces (Score: 0.349) The thematic areas with the weakest relative scores are Economic Capacity and Infrastructure (Communications). The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

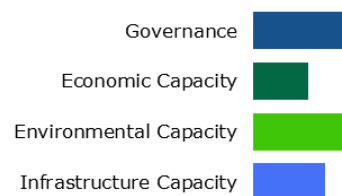


Table 4. Component Scores for each Coping Capacity Sub-component

	<b>Economic Capacity</b>	<b>0.88</b> Debt to Service Ratio	<b>89.6%</b> Employment Rate (Male)	<b>RD\$ 15,762</b> Average Annual Income per Capita			
	<b>Governance</b>	<b>79.6%</b> Registered Voter Participation (2016 Election)	<b>23.2</b> Homicide Rate per 100k persons	<b>59.7%</b> Households with Garbage Collection			
	<b>Environmental Capacity</b>	<b>28.9%</b> Protected or Reforested Land					
	<b>Infrastructure Capacity</b>						
	<b>Health Care Capacity</b>		<b>12.9</b> Hospital Beds per 10,000 Persons	<b>25.3</b> Nurses per 10,000 Persons	<b>10.8</b> Physicians per 10,000 Persons	<b>4.4 km</b> Average Distance to Nearest Hospital	<b>0.95</b> Vaccination Index <sup>5</sup>
	<b>Communications Capacity</b>		<b>6.8%</b> Households with Access to Fixed Phone Line	<b>56.4%</b> Households with Access to Mobile Phone			
	<b>Transportation Capacity</b>		<b>36.6 km</b> Average Distance to Nearest Port or Airport	<b>0.39 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.

<sup>5</sup> Vaccination Coverage Index: Coverage of DPT (diphtheria, pertussis, and tetanus), Polio, Tuberculosis, and Measles vaccinations. Index values range from 0 to 1, with 1 indicating higher coverage.

## Findings: Risk and Vulnerability Assessment (RVA)

### Lack of Resilience (LR)

Lack of Resilience<sup>6</sup> Rank: 2 of 32 Provinces (Score: 0.653)

Baoruco's score and ranking are due to very high Vulnerability combined with very low Coping Capacity scores. Baoruco ranks 1st in Vulnerability and 30th in Coping Capacity.

Table 5. The 3 Thematic areas with the Weakest Relative Scores



Vulnerable  
Health Status



Economic  
Constraints



Economic  
Capacity

### Multi-Hazard Risk (MHR)

Multi-Hazard Risk<sup>7</sup> Rank: 4 of 32 Provinces (Score: 0.563)

Baoruco's score and ranking are driven primarily by very high Vulnerability and very low Coping Capacity scores.

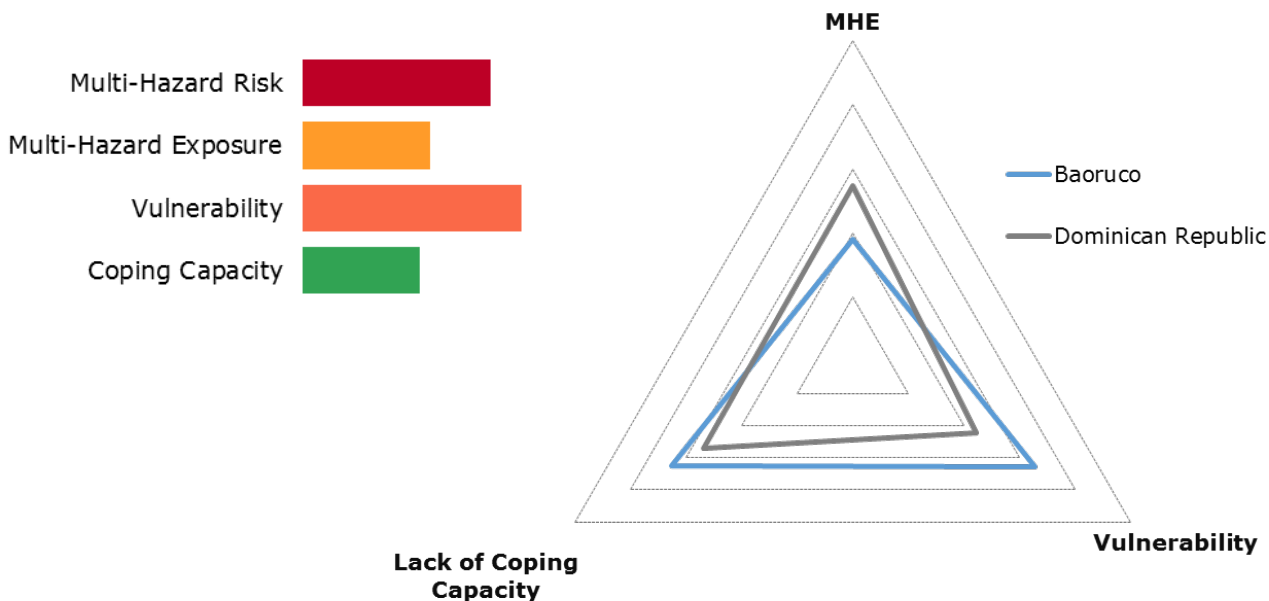


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

<sup>6</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 socio-economic conditions.

<sup>7</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



### Relatively low gender inequality

Driven by relative gender parity in government representation, education and in the workforce. Low gender inequality indicates that vulnerable populations are more likely to have their needs met under 'normal' conditions and may be less susceptible during times of disaster.

## Recommendations

01

### Reduce vulnerable health status

Invest in public welfare services to decrease malnutrition, support the disabled population, and decrease infant and maternal mortality.

02

### Increase economic capacity

Foster small-business development and invest in business education and human capital to raise economic stability and increase employment.

03

### Alleviate economic constraints

Focus investments to reduce poverty and encourage business development and education programs to increase stable and viable economic opportunities in the region.