

Better solutions.
Fewer disasters.
Safer world.



Barahona

Dominican Republic National Disaster Preparedness
Baseline Assessment
Province Profile

Findings: Risk and Vulnerability Assessment (RVA)

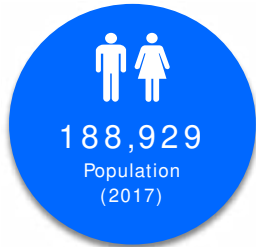
Province: Barahona

Province Capital: Barahona



Area: 1,847 km²

Barahona, located in the southwest of the country, is known for its beaches and turquoise waters. The main economic activity of the province is agriculture, producing coffee in the mountains and plantain and sugar cane in the valley of the river.



Municipality	Population
Barahona	84,442
Cabral	14,967
Enriquillo	13,290
Paraíso	15,538
Vicente Noble	21,815
El Peñón	4,008
La Ciénega	9,199
Fundación	8,122
Las Salinas	4,748
Polo	8,269
Jaquimeyes	4,531



Multi-Hazard Risk Rank:
Low (26 of 32)

Lack of Resilience Rank:
High (12 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	
Low		High		Low		Medium		Low	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.472	26	0.511	12	0.393	23	0.458	15	0.435	21

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 23 of 32 Provinces (Score: 0.393)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

215,159 People



Earthquake

0%

0 People



Landslide

72%

155,643 People



Flood

51%

109,409 People



Tsunami

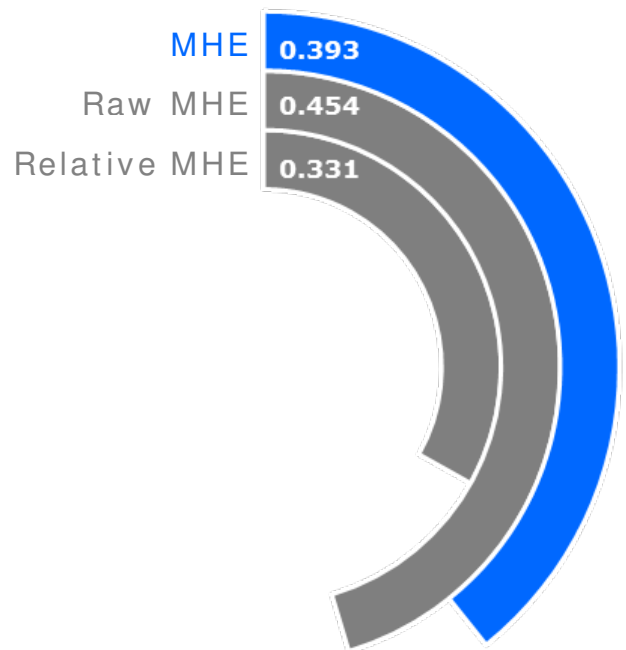
10%

21,028 People

Case Study: Building Resilience in Santa Cruz de Barahona

In July 2012, Santa Cruz de Barahona signed up for UNISDR's "Making Cities Resilient" Campaign. Concern regarding earthquakes and tsunamis prompted the city's support of the Campaign which aims "to reduce the loss of life due to disasters caused by natural hazards and to build the resilience of cities so that they can be better prepared and can better cope with the potential problems caused by disasters." Santa Cruz de Barahona further committed to the development of a Municipal Risk Management Unit with support from external partners, as well as training first responders in post-earthquake search and rescue, in order to "position itself internationally as a safe and resilient city."

"Cities Campaign Expands in Dominican Republic" – UNISDR, 23 July 2012



¹ Multi-Hazard Exposure: Average exposure of the population to hazards.

² 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)

Vulnerability³ Rank: 15 of 32 Provinces (Score: 0.458) Vulnerability in Barahona is influenced by Economic Constraints, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

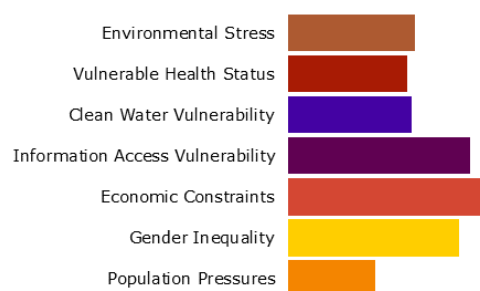









Table 3. Component Scores for each Vulnerability Sub-component

	Environmental Stress	41% Province Susceptible to Drought	-0.0% Average Annual Forest Change				
	Vulnerable Health Status	18.3 Infant Mortality Rate	45.3 Maternal Mortality Rate	13.6 Chronic Malnutrition	6.3% Population Disabled		
	Clean Water Vulnerability	12.7% Households without Access to Improved Water	14.3% Households without Access to Flush Toilets				
	Information Access Vulnerability	18.7% Illiteracy	88.8% Primary School Enrollment	94.4% Households without Internet	34.4% Households without TV	62.0% Households without Radio	5.9 Average years of Schooling
	Economic Constraints	66.5 Economic Dependency Ratio	65.1% Population in Poverty	42.8% CEP Beneficiaries			
	Gender Inequality	37.9% Female Seats in Government	1.1 Female to Male Years of Schooling	0.50 Female to Male Labor Ratio			
	Population Pressures	0.09% Average Annual Population Change	2.0% Average Annual Urban Population Change				

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

Coping Capacity (CC)

Coping Capacity⁴ Rank: 21 of 32 Provinces (Score: 0.435) The thematic areas with the weakest relative scores are Infrastructure (Communications and Transportation), and Economic Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

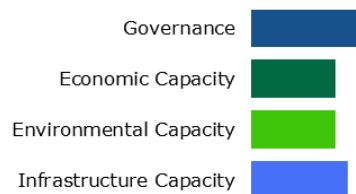


Table 4. Component Scores for each Coping Capacity Sub-component

	Economic Capacity	0.89 Debt to Service Ratio	91.5% Employment Rate (Male)	RD\$ 16,867 Average Annual Income per Capita			
	Governance	78.2% Registered Voter Participation (2016 Election)	22.3 Homicide Rate per 100k persons	70.5% Households with Garbage Collection			
	Environmental Capacity	25.7% Protected or Reforested Land					
	Infrastructure Capacity						
	Health Care Capacity		16.4 Hospital Beds per 10,000 Persons	32.7 Nurses per 10,000 Persons	15.1 Physicians per 10,000 Persons	5.0 km Average Distance to Nearest Hospital	0.71 Vaccination Index ⁵
	Communications Capacity		11.9% Households with Access to Fixed Phone Line	63.0% Households with Access to Mobile Phone			
	Transportation Capacity		20.0 km Average Distance to Nearest Port or Airport	0.34 km Total Length of Road per km ² (area)			

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

⁵ 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.

Lack of Resilience (LR)

Lack of Resilience⁶ Rank: 12 of 32 Provinces (Score: 0.511)

Barahona's score and ranking are due to moderate Vulnerability combined with low Coping Capacity scores. Barahona ranks 15th in Vulnerability and 21st in Coping Capacity.

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



Communications
Capacity



Economic
Constraints



Economic
Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 26 of 32 Provinces (Score: 0.472)

Barahona's score and ranking are due to low Multi-Hazard Exposure combined with moderate Vulnerability and low Coping Capacity scores.

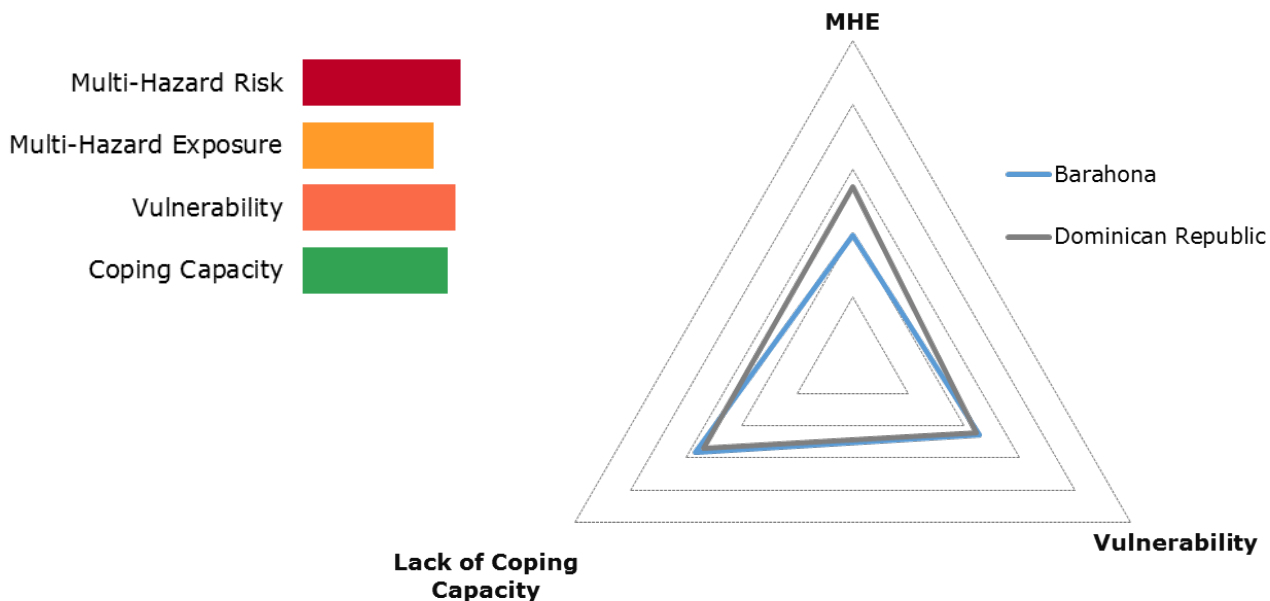


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

⁶ 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.

⁷ 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



High health care capacity

Ranked 9 of 32 provinces, high health care capacity indicates that the population will have access to healthcare services before, during, and after a disaster.



High environmental capacity

Ranked 10 of 32 provinces, high environmental capacity indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.

Recommendations

01

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.

02

Increase information access and communications capacity

Invest in educational programs, including non-traditional, community-based approaches to increase educational attainment and adult literacy. Support comprehensive efforts to increase access to information mediums (phone, internet, TV, radio) and distribute disaster-preparedness and hazard-warning information in multiple formats and across multiple platforms, ensuring that vulnerable communities receive easily understandable and actionable disaster-related information.

03

Increase economic capacity

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