

Better solutions.
Fewer disasters.
Safer world.



Monte Cristi

Dominican Republic National Disaster Preparedness
Baseline Assessment
Province Profile

Findings: Risk and Vulnerability Assessment (RVA)

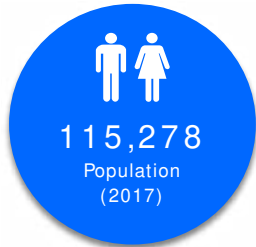
Province: Monte Cristi

Province Capital: San Fernando de Monte Cristi

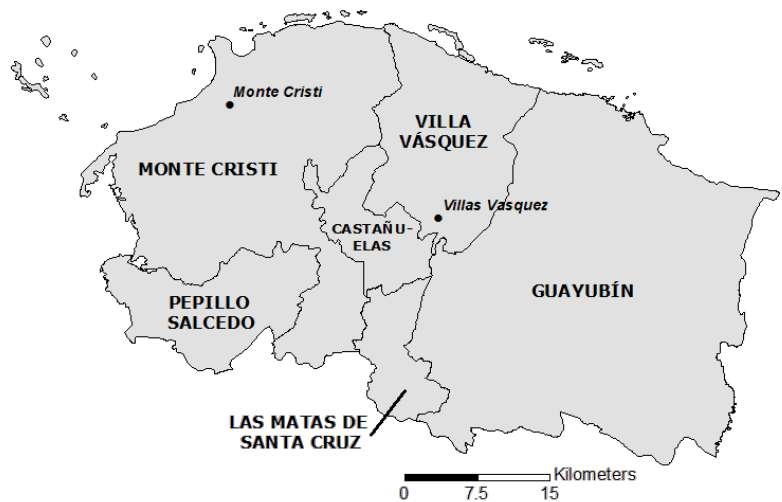


Area: 2,137 km²

Monte Cristi is located in the northwest of the country in the coastal lowlands near the border with Haiti. Monte Cristi is an important commercial and transportation center, trading mainly in rice, cotton, coffee, bananas, goats, hides and skins from the western portion of the fertile Cibao Valley.



Municipality	Population
Monte Cristi	25,918
Castañuelas	15,693
Guayabin	37,777
Las Matas De Santa Cruz	11,107
Pepillo Salcedo	9,611
Villa Vásquez	15,172



**Multi-Hazard Risk Rank:
Very High (6 of 32)**

**Lack of Resilience Rank:
High (8 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		High		Medium		Very High		High	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.558	6	0.545	8	0.584	15	0.565	7	0.475	14

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 15 of 32 Provinces (Score: 0.584)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

135,611 People



Earthquake

100%

135,611 People



Landslide

46%

62,132 People



Flood

58%

78,551 People



Tsunami

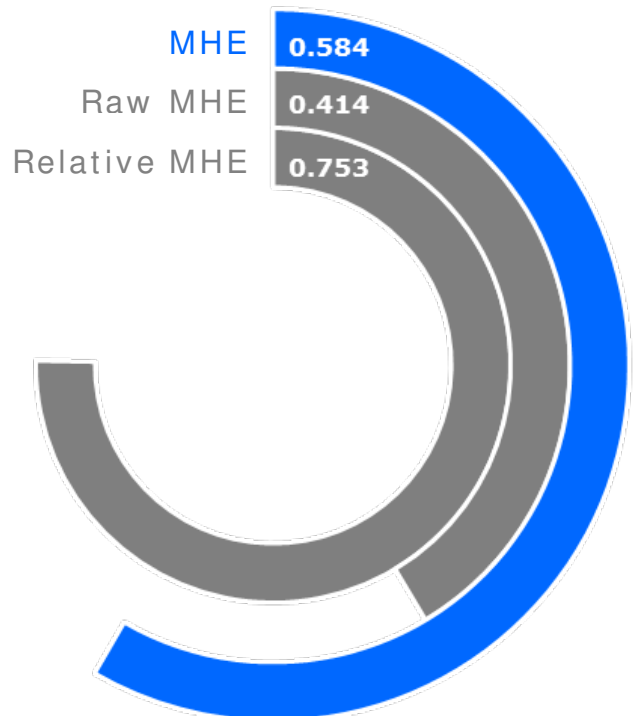
4%

5,357 People

Case Study: Improving Emergency Medical Services in the Dominican Republic

Trek Medics, a nonprofit medical organization, has been working in the provinces of Monte Cristi and Puerto Plata in the Dominican Republic since 2014. Through partnerships with public safety and health agencies, as well as the Dominican Red Cross, Trek Medics has sought to improve emergency medical services in rural and urban communities. Trek Medics' projects have included the development of "a 24-7 emergency response network" across the provinces, as well as "prehospital emergency care and inter-facility transfers...to promote reliable emergency care and transport."

DR Program - Trek Medics, 2019
<https://www.trekmedics.org/programs/dr/>



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: 7 of 32 Provinces (Score: 0.565) Vulnerability in Monte Cristi is strongly influenced by Vulnerable Health Status, Gender Inequality, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

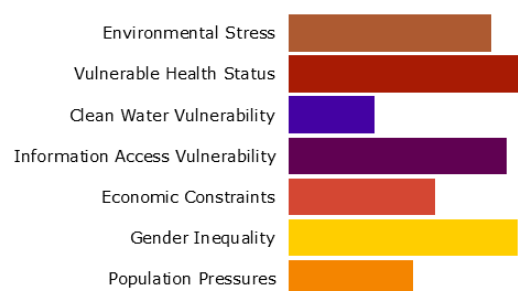









Table 3. Component Scores for each Vulnerability Sub-component

	Environmental Stress	100% Province Susceptible to Drought	1.6% Average Annual Forest Change				
	Vulnerable Health Status	23.0 Infant Mortality Rate	250.7 Maternal Mortality Rate	11.9 Chronic Malnutrition	10.5% Population Disabled		
	Clean Water Vulnerability	10.6% Households without Access to Improved Water	9.7% Households without Access to Flush Toilets				
	Information Access Vulnerability	22.4% Illiteracy	77.4% Primary School Enrollment	95.6% Households without Internet	37.3% Households without TV	58.3% Households without Radio	5.8 Average years of Schooling
	Economic Constraints	58.4 Economic Dependency Ratio	59.7% Population in Poverty	38.9% CEP Beneficiaries			
	Gender Inequality	38.0% Female Seats in Government	1.2 Female to Male Years of Schooling	0.55 Female to Male Labor Ratio			
	Population Pressures	0.69% Average Annual Population Change	1.3% Average Annual Urban Population Change				

³ 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 Capacity⁴ Rank: 14 of 32 Provinces (Score: 0.475) The thematic areas with the weakest relative scores are Environmental Capacity and Infrastructure (Communications). The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

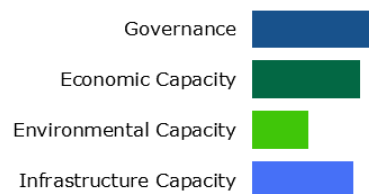









Table 4. Component Scores for each Coping Capacity Sub-component

	Economic Capacity	0.97 Debt to Service Ratio	93.5% Employment Rate (Male)	RD\$ 18,980 Average Annual Income per Capita			
	Governance	78.7% Registered Voter Participation (2016 Election)	14.1 Homicide Rate per 100k persons	51.5% Households with Garbage Collection			
	Environmental Capacity	17.3% Protected or Reforested Land					
	Infrastructure Capacity						
	Health Care Capacity		14.8 Hospital Beds per 10,000 Persons	18.5 Nurses per 10,000 Persons	15.4 Physicians per 10,000 Persons	4.2 km Average Distance to Nearest Hospital	0.88 Vaccination Index ⁵
	Communications Capacity		11.3% Households with Access to Fixed Phone Line	68.7% Households with Access to Mobile Phone			
	Transportation Capacity		33.6 km Average Distance to Nearest Port or Airport	0.61 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: 8 of 32 Provinces (Score: 0.545)

Monte Cristi's score and ranking are due to high Vulnerability combined with moderate Coping Capacity scores. Monte Cristi ranks 7th in Vulnerability and 14th in Coping Capacity.

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



Vulnerable Health Status



Gender Inequality



Information Access Vulnerability

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 6 of 32 Provinces (Score: 0.558)

Monte Cristi's score and ranking are due to moderate Multi-Hazard Exposure combined with high Vulnerability and moderate Coping Capacity.

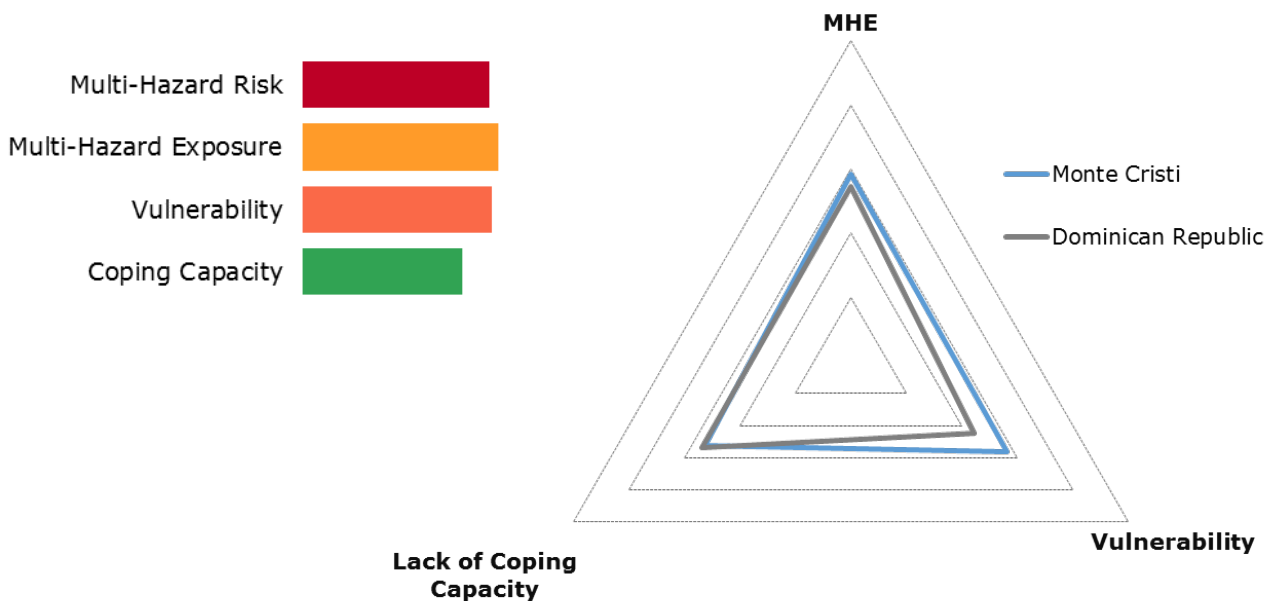


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

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



Low clean water vulnerability

Ranked 21 of 32 provinces, low clean water vulnerability indicates that a population has access to high water quality and good containment systems, reducing susceptibility to disaster.



High overall governance

Ranked 11 of 32 provinces, high governance could facilitate the implementation of disaster management initiatives into provincial and municipal communities.

Recommendations

01

Invest in access to health care

Through education, facility construction, and traveling care programs, increase the citizens' ability to access health-related information and physical care, especially for new/expectant mothers and young children.

02

Invest in communication infrastructure

Invest in communication infrastructure to allow for easier access to information and education material, increasing literacy and situational awareness of the population.

03

Provide opportunities for women

Public education and awareness programs, as well as increased business and political opportunities that focus on advancing the role of women in the workplace and the society, will improve resilience and decrease vulnerability.