Better solutions.
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San Pedro de Macorís

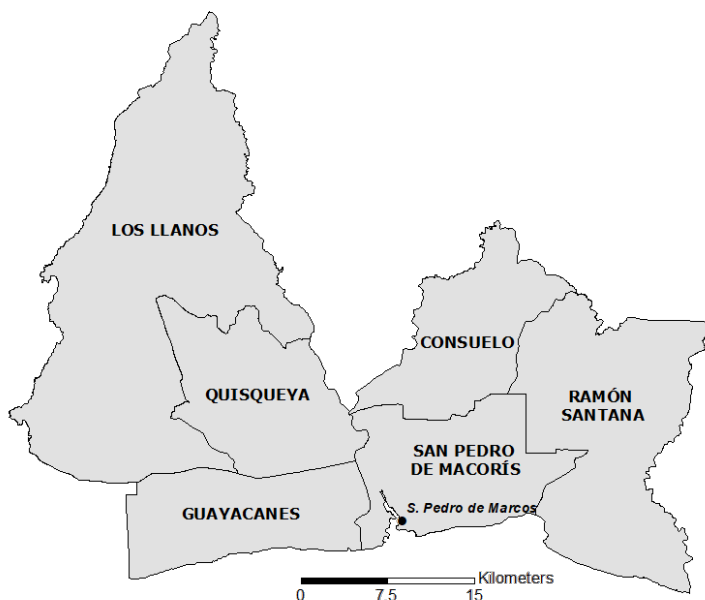## Province: San Pedro de Macorís

Province Capital: San Pedro de Macorís

Area: 1,403 km^2

Located in the southeast of the country, San Pedro de Macorís is known for the production of sugar. It also includes a commercial port which handles exports of sugar, cement, cattle, and timber. Other industries include corn milling, the manufacture of clothing and soap, and alcohol distilling.

301,215
Population
(2017)

46.7%
Population in
Poverty

10.7%
Illiterate
Population

17.9
Infant Mortality
Rate

75.6%
Access to
Improved Water
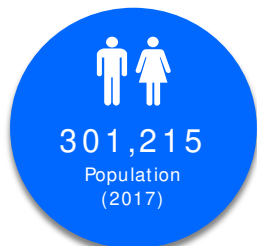
Municipality	Population
San Pedro De Macorís	202,545
Los Llanos	23,409
Ramon Santana	9,229
Consuelo	31,163
Quisqueya	19,740
Guayacanes	15,129

Multi-Hazard Risk Rank:
Medium (17 of 32)

Lack of Resilience Rank:
Low (26 of 32)

LOS LLANOS

CONSUELO

QUISQUEYA

RAMÓN SANTANA

SAN PEDRO DE MACORÍS

GUAYACANES

S. Pedro de Marcos

Kilometers
0   7.5   15

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	
Medium		Low		High		Low		High	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.519	17	0.433	26	0.691	10	0.351	26	0.485	12

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure[1] Rank: 10 of 32 Provinces (Score: 0.691)

Table 2. Estimated ambient population[2] exposed to each hazard

Cyclone
100%
364,283 People

Earthquake
100%
364,283 People

Landslide
62%
224,908 People
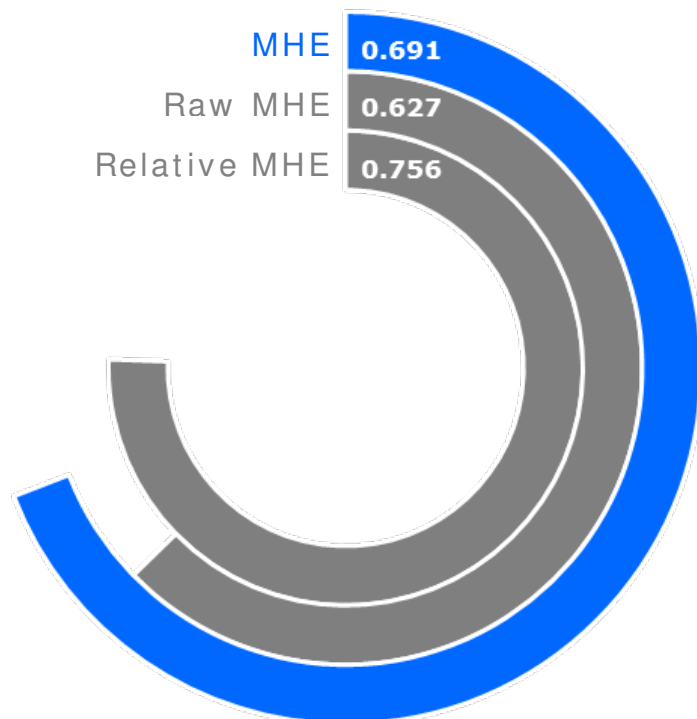
Flood
14%
50,058 People

Tsunami
33%
119,080 People

Case Study: Improved Climate Information Project

From March 2015-2018, USAID worked to develop a web-based National Climate Observatory for areas of the Dominican Republic most vulnerable to climate change impacts, including San Pedro de Macorís. This tool promoted effective "climate risk-based decision-making" through local planning efforts. Implemented through Instituto Tecnológico de Santo Domingo, this project supported the training of climate change professionals to enable data gathering and sharing.

"USAID Dominican Republic Factsheet: Improved Climate Information Project" – https://www.climatelinks.org/sites/default/files/asset/document/2.5%20FACT%20SHEET%20-%20Improved%20Climate%20Information%20-%20FINAL.pdf

MHE 0.691
Raw MHE 0.627
Relative MHE 0.756

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[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.

Vulnerability (V)

Vulnerability[3] Rank: 26 of 32 Provinces (Score: 0.351) Vulnerability in San Pedro de Macorís is influenced by Clean Water Vulnerability, Environmental Stress, and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.
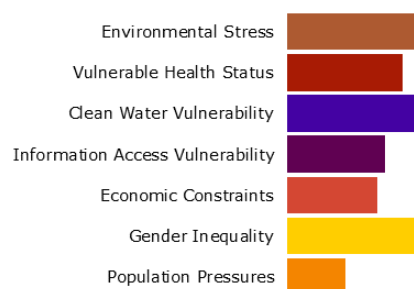
Environmental Stress
Vulnerable Health Status
Clean Water Vulnerability
Information Access Vulnerability
Economic Constraints
Gender Inequality
Population Pressures

Table 3. Component Scores for each Vulnerability Sub-component

Environmental Stress	60.8% Province Susceptible to Drought	1.9% Average Annual Forest Change				
Vulnerable Health Status	17.9 Infant Mortality Rate	84.5 Maternal Mortality Rate	8.5 Chronic Malnutrition	8.2% Population Disabled		
Clean Water Vulnerability	24.4% Households without Access to Improved Water	10.1% Households without Access to Flush Toilets				
Information Access Vulnerability	10.7% Illiteracy	94.8% Primary School Enrollment	89.8% Households without Internet	22.1% Households without TV	55.1% Households without Radio	6.9 Average years of Schooling
Economic Constraints	55.4 Economic Dependency Ratio	46.7% Population in Poverty	31.6% CEP Beneficiaries			
Gender Inequality	36.4% Female Seats in Government	11 Female to Male Years of Schooling	0.40 Female to Male Labor Ratio			
Population Pressures	0.48% Average Annual Population Change	0.02% Average Annual Urban Population Change				

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

Coping Capacity (CC)

Coping Capacity[4] Rank: 12 of 32 Provinces (Score: 0.485) The thematic areas with the weakest relative scores are Environmental Capacity and Economic Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.
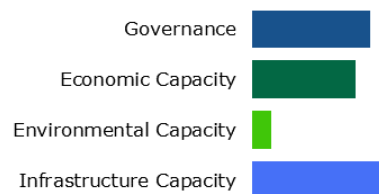
	Governance
	Economic Capacity
	Environmental Capacity
	Infrastructure Capacity

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

Economic Capacity	**1.01** Debt to Service Ratio	**92.2%** Employment Rate (Male)	**RD$ 24,607** Average Annual Income per Capita			
Governance	**72.3%** Registered Voter Participation (2016 Election)	**19.8** Homicide Rate per 100k persons	**77.8%** Households with Garbage Collection			
Environmental Capacity	**6.0%** Protected or Reforested Land					
Infrastructure Capacity						
Health Care Capacity	**11.0** Hospital Beds per 10,000 Persons	**11.7** Nurses per 10,000 Persons	**23.0** Physicians per 10,000 Persons	**2.9 km** Average Distance to Nearest Hospital	**0.76** Vaccination Index[5]	
Communications Capacity	**18.2%** Households with Access to Fixed Phone Line	**76.9%** Households with Access to Mobile Phone				
Transportation Capacity	**17.6 km** Average Distance to Nearest Port or Airport	**0.94 km** Total Length of Road per km^2 (area)				

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[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 Resilience[6] Rank: 26 of 32 Provinces (Score: 0.433)

San Pedro de Macorís's score and ranking are due to very low Vulnerability combined with high Coping Capacity scores. San Pedro de Macorís ranks 26th in Vulnerability and 12th in Coping Capacity.

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

Environmental Capacity

Economic Capacity

Clean Water Vulnerability

Multi-Hazard Risk (MHR)

Multi-Hazard Risk[7] Rank: 17 of 32 Provinces (Score: 0.519)

San Pedro de Macorís's score and ranking are due to high Multi-Hazard Exposure combined with very low Vulnerability and high Coping Capacity.
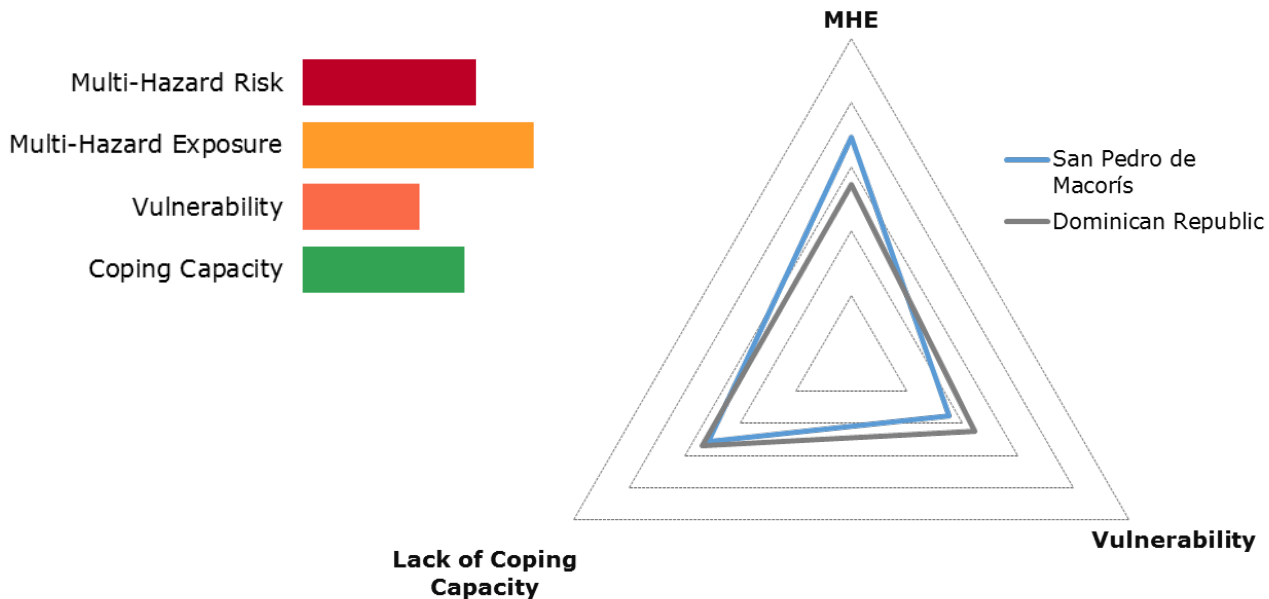

Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

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[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 information access

High information access indicates that the population has an increased ability to access and comprehend disaster-related information before, during, and after events.

Low population pressures

Ranked 30 of 32 provinces, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.

High overall infrastructure capacity

Ranked 5 of 32 provinces, well developed infrastructure – communication, health care, transportation - facilitates the exchange of information, and physical distribution of goods and services to the population.

Recommendations

01

Increase economic capacity

Encourage business development and education programs to increase economic opportunities in the region.

02

Increase environmental programs

Invest in programs to provide protection for the environment, including protected lands and reforestation projects, to increase the ability of the environment to recover after a disaster.

02

Increase government water services

Investments in public water and sewer facilities will help to decrease vulnerability and increase access to clean water during a disaster.