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Fewer disasters.  
Safer world.



# San Juan

Dominican Republic National Disaster Preparedness  
Baseline Assessment  
Province Profile

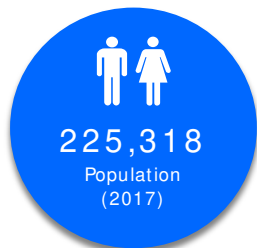
## Findings: Risk and Vulnerability Assessment (RVA)

### Province: San Juan

Province Capital: San Juan de la Maguana

Area: 3,774 km<sup>2</sup>

Located in the valley region, San Juan is the largest province in Dominican Republic. Economic activities include livestock and agriculture and the province several hydro-electric dams.



Municipality	Population
San Juan	128,188
Bohechío	9,393
El Cercado	20,217
Juan De Herrera	12,665
Las Matas De Farfán	42,828
Vallejuelo	12,027



**Multi-Hazard Risk Rank:  
Medium (19 of 32)**

**Lack of Resilience Rank:  
Very High (6 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	
Medium		Very High		Low		High		Very Low	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.515	19	0.586	6	0.372	25	0.540	9	0.367	28

## Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure<sup>1</sup> Rank: 25 of 32 Provinces (Score: 0.372)

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



Cyclone

100%

291,246 People



Earthquake

1%

4,191 People



Landslide

70%

202,629 People



Flood

46%

133,888 People



Tsunami

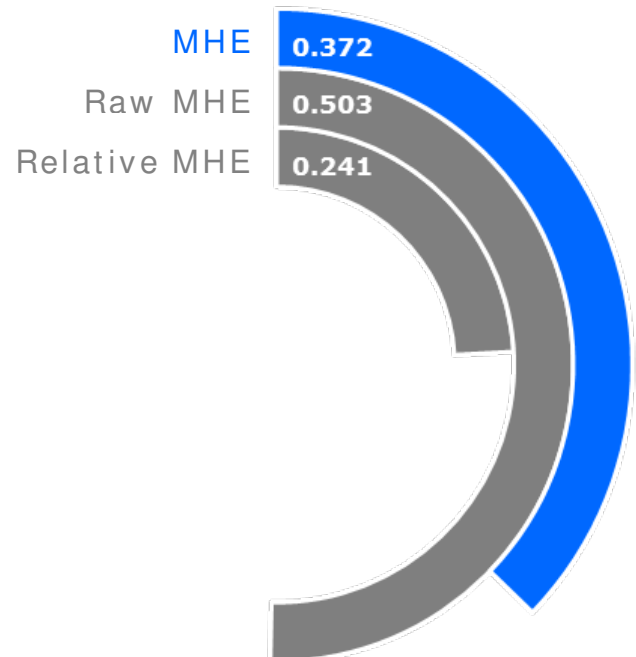
0%

0 People

### Case Study: SAFE Agriculture in San Juan

USDA has funded a five year program to “improve agricultural productivity for livestock and expand exports and trade.” Known in the Dominican Republic as Progana, the Safe Agriculture/Food Export (SAFE) Program works with “smallholder livestock owners with 100 heads of cattle or less”. Farmers are trained on improving management and production techniques, as well as animal nutrition and sanitary concerns. Local farm field schools are used for trainings to provide hands-on experience for the participants. The SAFE Program is expected to significantly increase export earning potential for Dominican farmers.

“Safe Agriculture/Food Export (SAFE) Program” – NGO Aid Map, <https://www.ngoaidmap.org/projects/16809>



<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: 9 of 32 Provinces (Score: 0.540) Vulnerability in San Juan is influenced by Economic Constraints, Gender Inequality, and Vulnerable Health Status. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

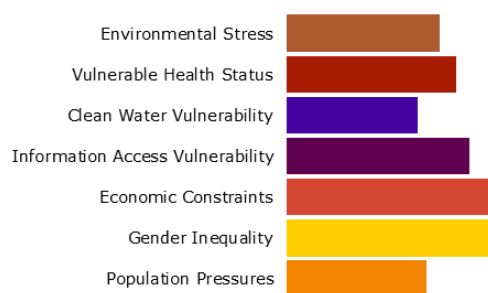









Table 3. Component Scores for each Vulnerability Sub-component

	<b>Environmental Stress</b>	<b>45.8%</b> Province Susceptible to Drought	<b>-1.7%</b> Average Annual Forest Change				
	<b>Vulnerable Health Status</b>	<b>15.4</b> Infant Mortality Rate	<b>160.3</b> Maternal Mortality Rate	<b>15.2</b> Chronic Malnutrition	<b>7.8%</b> Population Disabled		
	<b>Clean Water Vulnerability</b>	<b>13.4%</b> Households without Access to Improved Water	<b>15.0%</b> Households without Access to Flush Toilets				
	<b>Information Access Vulnerability</b>	<b>23.6%</b> Illiteracy	<b>92.8%</b> Primary School Enrollment	<b>95.6%</b> Households without Internet	<b>34.8%</b> Households without TV	<b>57.6%</b> Households without Radio	<b>5.4</b> Average years of Schooling
	<b>Economic Constraints</b>	<b>66.7</b> Economic Dependency Ratio	<b>62.2%</b> Population in Poverty	<b>48.1%</b> CEP Beneficiaries			
	<b>Gender Inequality</b>	<b>33.5%</b> Female Seats in Government	<b>1.1</b> Female to Male Years of Schooling	<b>0.55</b> Female to Male Labor Ratio			
	<b>Population Pressures</b>	<b>0.48%</b> Average Annual Population Change	<b>2.8%</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.

## Findings: Risk and Vulnerability Assessment (RVA)

### Coping Capacity (CC)

Coping Capacity<sup>4</sup> Rank: 28 of 32 Provinces (Score: 0.367) San Juan's weakest relative scores are in the thematic areas of Economic Capacity and Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

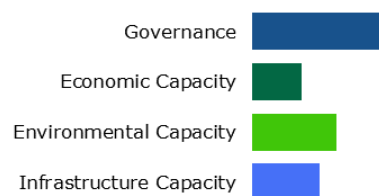


Table 4. Component Scores for each Coping Capacity Sub-component

	<b>Economic Capacity</b>	1.12 Debt to Service Ratio	91.3% Employment Rate (Male)	RD\$ 18,130 Average Annual Income per Capita			
	<b>Governance</b>	78.0% Registered Voter Participation (2016 Election)	17.0 Homicide Rate per 100k persons	63.7% Households with Garbage Collection			
	<b>Environmental Capacity</b>	25.6% Protected or Reforested Land					
	<b>Infrastructure Capacity</b>						
	<b>Health Care Capacity</b>		17.0 Hospital Beds per 10,000 Persons	26.9 Nurses per 10,000 Persons	13.7 Physicians per 10,000 Persons	4.7 km Average Distance to Nearest Hospital	0.37 Vaccination Index <sup>5</sup>
	<b>Communications Capacity</b>		9.8% Households with Access to Fixed Phone Line	66.6% Households with Access to Mobile Phone			
	<b>Transportation Capacity</b>		59.9 km Average Distance to Nearest Port or Airport	0.32 km 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.

## Lack of Resilience (LR)

Lack of Resilience<sup>6</sup> Rank: 6 of 32 Provinces (Score: 0.586)

San Juan's score and ranking are due to high Vulnerability combined with very low Coping Capacity scores. San Juan ranks 9th in Vulnerability and 28th in Coping Capacity.

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



Transportation  
Infrastructure  
Capacity



Economic  
Capacity



Economic  
Constraints

## Multi-Hazard Risk (MHR)

Multi-Hazard Risk<sup>7</sup> Rank: 19 of 32 Provinces (Score: 0.515)

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

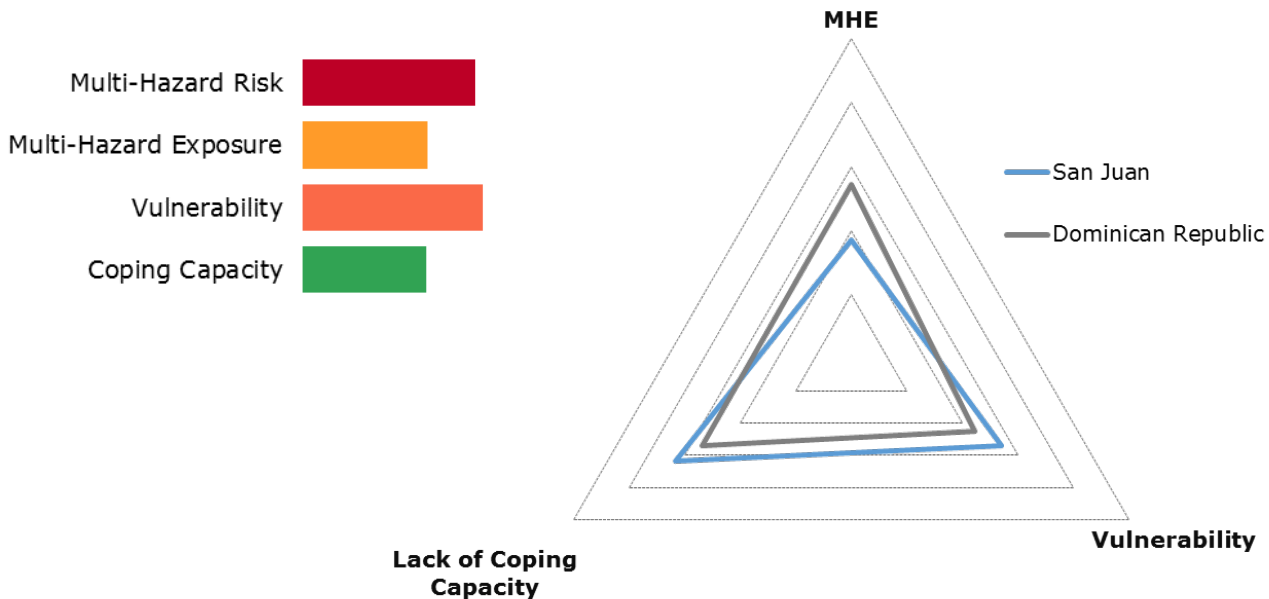


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

<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



### High overall governance

Ranked 10 of 32 provinces, high governance could facilitate the implementation of disaster management initiatives into provincial and municipal communities.



### High environmental capacity

Ranked 11 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

### Invest in transportation infrastructure

Investing in transportation infrastructure will facilitate the distribution of goods and services before, during, and after a disaster event.

02

### Increase economic capacity

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