

Better solutions.
Fewer disasters.
Safer world.



Santo Domingo

Dominican Republic National Disaster Preparedness
Baseline Assessment
Province Profile

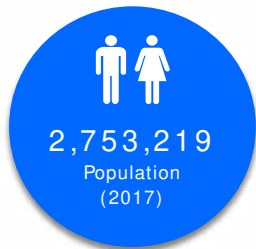
Findings: Risk and Vulnerability Assessment (RVA)

Province: Santo Domingo

Province Capital: Santo Domingo

Area: 1,457 km²

Located in the south of the country, Santo Domingo is the industrial, commercial and financial center of the country. It's city, of the same name, is the oldest and most populous in The Caribbean.



Municipality	Population
Santo Domingo Este	1,100,336
Santo Domingo Oeste	421,299
Santo Domingo Norte	613,833
Boca Chica	164,670
San Antonio De Guerra	50,972
Pedro Brand	85,825
Los Alcarrizos	316,284



**Multi-Hazard Risk Rank:
High (8 of 32)**

**Lack of Resilience Rank:
Very Low (29 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	
High		Very Low		Very High		Very Low		Very High	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.538	8	0.392	29	0.829	2	0.328	28	0.544	6

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 2 of 32 Provinces (Score: 0.829)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

2,188,077
People



Earthquake

95%

2,087,669
People



Landslide

79%

1,725,564
People



Flood

6%

134,252 People



Tsunami

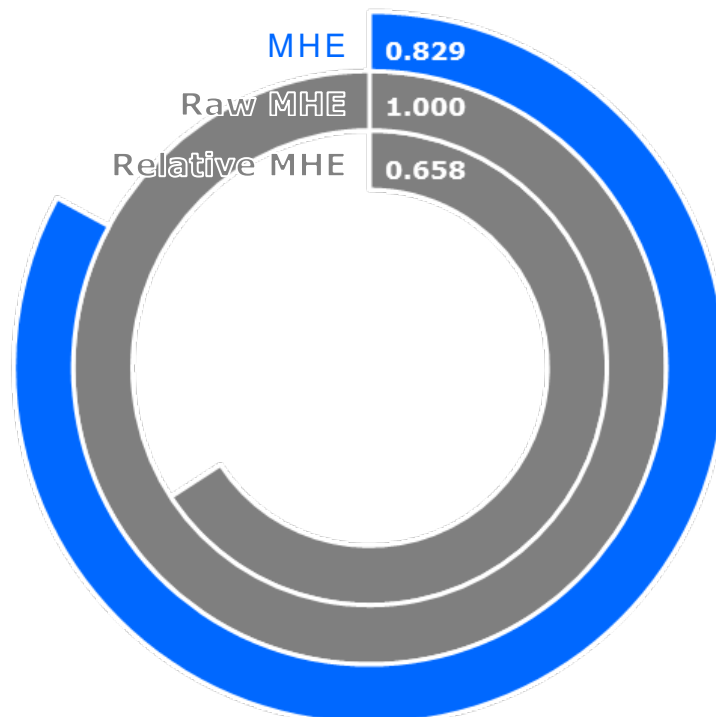
11%

229,768 People

Case Study: Post-Storm Recovery in the DR

In October 2007, the Dominican Republic was struck by Tropical Storm Noel and, five weeks later, by Tropical Storm Olga. Water infrastructure was severely damaged by these events, requiring the country to work with the United Nations to design and implement the *Emergency Recovery and Disaster Management Project* from 2008 to 2016. For the duration of the project, “over a million gallons of drinking water were provided to the population cut off from the regular water supply” in Santo Domingo as the country worked to restore the city’s water treatment facilities.

“Contributing to Post-Storm Recovery in the Dominican Republic” – The World Bank, 19 October 2017



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: 28 of 32 Provinces (Score: 0.328) Vulnerability in Santo Domingo is notably influenced by a high Population Pressures. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

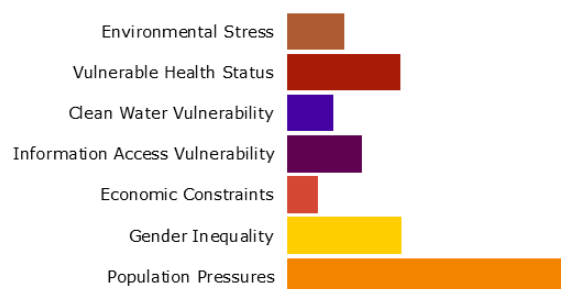









Table 3. Component Scores for each Vulnerability Sub-component

	Environmental Stress	0.03% Province Susceptible to Drought	0.5% Average Annual Forest Change				
	Vulnerable Health Status	19.9 Infant Mortality Rate	84.6 Maternal Mortality Rate	8.7 Chronic Malnutrition	7.2% Population Disabled		
	Clean Water Vulnerability	11.0% Households without Access to Improved Water	3.5% Households without Access to Flush Toilets				
	Information Access Vulnerability	8.7% Illiteracy	80.3% Primary School Enrollment	82.8% Households without Internet	15.3% Households without TV	46.9% Households without Radio	7.6 Average years of Schooling
	Economic Constraints	53.7 Economic Dependency Ratio	34.6% Population in Poverty	20.7% CEP Beneficiaries			
	Gender Inequality	35.6% Female Seats in Government	1.1 Female to Male Years of Schooling	0.36 Female to Male Labor Ratio			
	Population Pressures	2.18% Average Annual Population Change	8.6% 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: 6 of 32 Provinces (Score: 0.544)
 The thematic areas with the weakest relative scores are Environmental Capacity, Health Care Capacity and Governance. The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

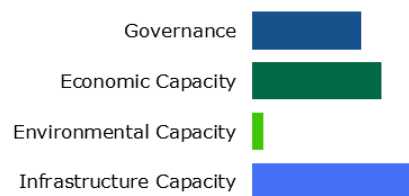









Table 4. Component Scores for each Coping Capacity Sub-component

	Economic Capacity	0.91 Debt to Service Ratio	92.7% Employment Rate (Male)	RD\$ 25,555 Average Annual Income per Capita			
	Governance	65.4% Registered Voter Participation (2016 Election)	16.7 Homicide Rate per 100k persons	80.0% Households with Garbage Collection			
	Environmental Capacity	3.5% Protected or Reforested Land					
	Infrastructure Capacity						
	Health Care Capacity		6.7 Hospital Beds per 10,000 Persons	6.9 Nurses per 10,000 Persons	9.3 Physicians per 10,000 Persons	2.2 km Average Distance to Nearest Hospital	0.52 Vaccination Index ⁵
	Communications Capacity		34.0% Households with Access to Fixed Phone Line	83.6% Households with Access to Mobile Phone			
	Transportation Capacity		9.7 km Average Distance to Nearest Port or Airport	2.76 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: 29 of 32 Provinces (Score: 0.392)

Santo Domingo's score and ranking are due to very low Vulnerability combined with very high Coping Capacity scores. Santo Domingo ranks 28th in Vulnerability and 6th in Coping Capacity.

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



Environmental Capacity



Population Pressures



Health Care Infrastructure Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 8 of 32 Provinces (Score: 0.538)

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

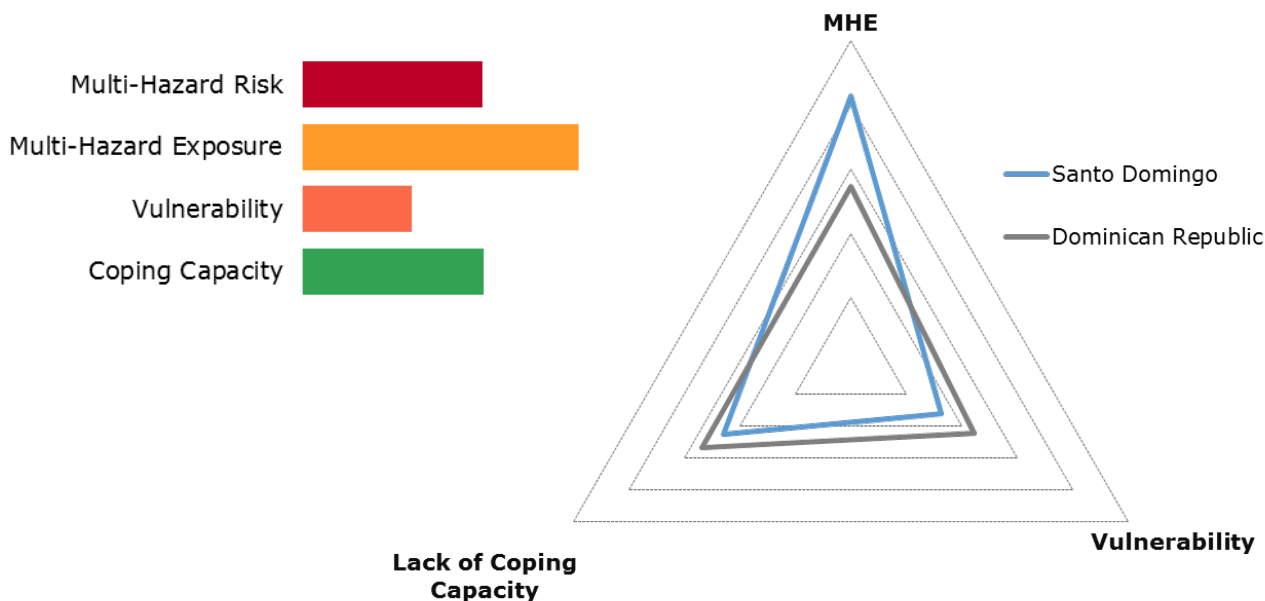


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

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



High economic capacity

Ranked 6 of 32 provinces, high economic capacity indicates that Santo Domingo may be able to invest in additional mitigation and preparedness measures at the local and community level.



High overall infrastructure capacity

Ranked 2 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.



High overall coping capacity

Ranking 6 of 32 provinces, high coping capacity indicates the province's ability, using existing skills and resources, to face and manage adverse conditions, emergencies, or disasters.

Recommendations

01

Improve environmental capacity

Invest in protected areas to reduce environmental stress and degradation.

02

Reduce population pressure

Rapid population changes are difficult to plan for, and can destabilize social, economic, and environmental systems. Analyze trends in the province to determine potential population changes and increase the update frequency of plans and SOPS to accommodate the changes.

03

Build health care capacity

Focus investments to increase access to health care and preventative medicine, as well as transportation to improve connectivity and ensure that health services can be reached by the entire population.