

Better solutions.
Fewer disasters.
Safer world.



La Altagracia

Dominican Republic National Disaster Preparedness
Baseline Assessment
Province Profile

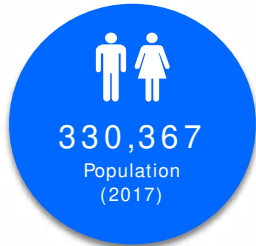
Findings: Risk and Vulnerability Assessment (RVA)

Province: La Altagracia

Province Capital: Salvaleón de Higüey

Area: 3,355 km²

La Altagracia, the most eastern province in Dominican Republic and its second largest, includes the economically important ecotourism area of Punta Cana.



Municipality	Population
Higüey	303,820
San Rafael Del Yuma	26,547



**Multi-Hazard Risk Rank:
High (11 of 32)**

**Lack of Resilience Rank:
High (11 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		High		Medium		High		High	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.532	11	0.514	11	0.568	17	0.542	8	0.515	9

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 17 of 32 Provinces (Score: 0.568)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

220,007 People



Earthquake

100%

220,007 People



Landslide

55%

121,568 People



Flood

24%

51,734 People



Tsunami

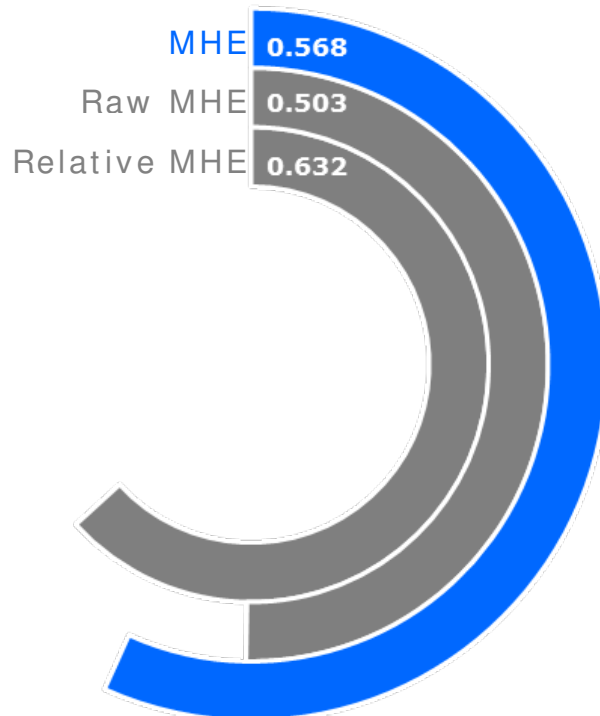
8%

16,542 People

Case Study: Hurricane Irma Impacts and the DRC

The province of La Altagracia was one of the most affected areas of the country after the passage of Hurricane Irma in early September 2017. Following the hurricane, the Dominican Red Cross (DRC) deployed teams to the province to conduct rapid damage assessment and needs analysis (DANA). These DRC teams also supported the UN Country Team and the Dominican Government in conducting a multi-sectorial damage assessment and needs analysis. Through these assessments, the DRC was able to effectively distribute relief supplies to transition the province from response to recovery operations.

"Dominican Republic: Hurricane Irma (MDRDO010) DREF Operation Update"
– IFRC, 14 December 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: 8 of 32 Provinces (Score: 0.542) Vulnerability in La Altagracia is strongly influenced by, Population Pressures, Environmental Stress, and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

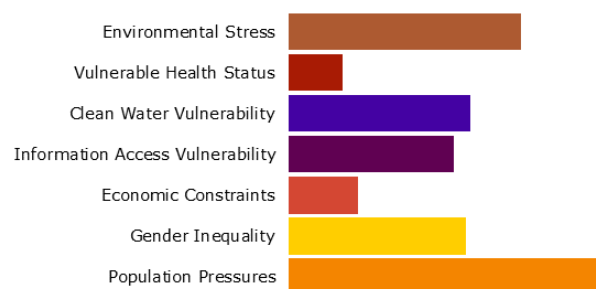









Table 3. Component Scores for each Vulnerability Sub-component

	Environmental Stress	47.8% Province Susceptible to Drought	-8.9% Average Annual Forest Change				
	Vulnerable Health Status	8.1 Infant Mortality Rate	54.1 Maternal Mortality Rate	8.3 Chronic Malnutrition	7.5% Population Disabled		
	Clean Water Vulnerability	72.6% Households without Access to Improved Water	5.0% Households without Access to Flush Toilets				
	Information Access Vulnerability	13.6% Illiteracy	81.2% Primary School Enrollment	90.0% Households without Internet	31.9% Households without TV	61.0% Households without Radio	6.4 Average years of Schooling
	Economic Constraints	53.4 Economic Dependency Ratio	50.5% Population in Poverty	24.5% CEP Beneficiaries			
	Gender Inequality	27.8% Female Seats in Government	1.1 Female to Male Years of Schooling	0.42 Female to Male Labor Ratio			
	Population Pressures	2.9% Average Annual Population Change	9.7% 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: 9 of 32 Provinces (Score: 0.515)
 The thematic areas with the weakest relative scores are Governance, Environmental Capacity and Infrastructure (Health Care Capacity). The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

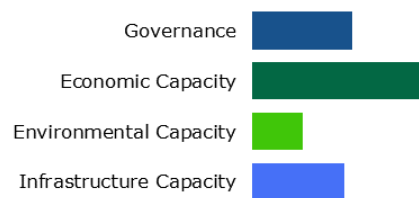









Table 4. Component Scores for each Coping Capacity Sub-component

	Economic Capacity	0.60 Debt to Service Ratio	92.0% Employment Rate (Male)	RD\$ 31,687 Average Annual Income per Capita			
	Governance	70.8% Registered Voter Participation (2016 Election)	21.8 Homicide Rate per 100k persons	75.8% Households with Garbage Collection			
	Environmental Capacity	15.3% Protected or Reforested Land					
	Infrastructure Capacity						
	Health Care Capacity		4.1 Hospital Beds per 10,000 Persons	4.5 Nurses per 10,000 Persons	7.4 Physicians per 10,000 Persons	5.1 km Average Distance to Nearest Hospital	0.88 Vaccination Index ⁵
	Communications Capacity		11.0% Households with Access to Fixed Phone Line	80.2% Households with Access to Mobile Phone			
	Transportation Capacity		24.3 km Average Distance to Nearest Port or Airport	0.41 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: 11 of 32 Provinces (Score: 0.514)

La Altagracia's score and ranking are due to high Vulnerability combined with low Coping Capacity scores. La Altagracia ranks 8th in Vulnerability and 9th in highest Coping Capacity.

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



Population Pressures



Health Care Infrastructure Capacity



Environmental Stress

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 11 of 32 Provinces (Score: 0.532)

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

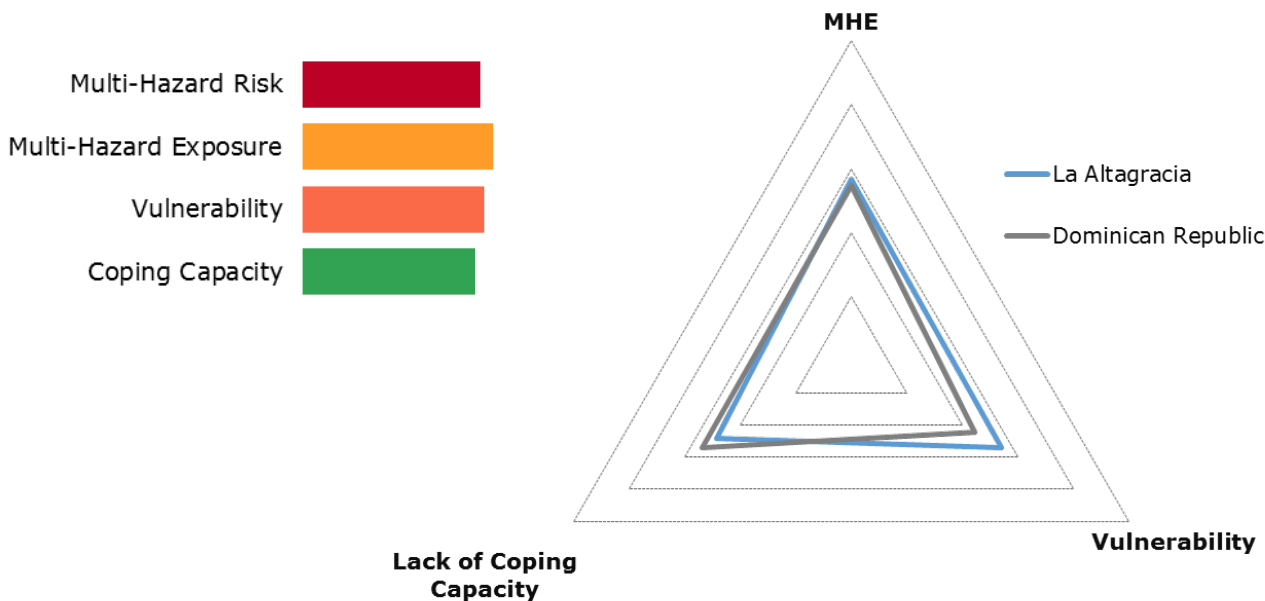


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

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



Low est vulnerable health status

Ranked 32 of 32 provinces, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



Low economic constraints

Ranked 24 of 32 provinces, low economic constraints indicate that La Altagracia may be able to invest in additional mitigation and preparedness measures at the local and community level.



Highest economic capacity

Ranked 1 of 32 provinces, high economic capacity indicates that La Altagracia may be able to invest in additional mitigation and preparedness measures at the local and community level.

Recommendations

01

Reduce Environmental Stress

Invest in drought and erosion mitigation projects to reduce environmental stress and degradation.

02

Increase health care availability

Increase clinics and medical personnel through incentivized programs and investments to increase the health resilience of the population.

03

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.