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Elías Piña

Dominican Republic National Disaster Preparedness Baseline Assessment

Province Profile

Findings: Risk and Vulnerability Assessment (RVA)

Province: Elías Piña

Province Capital: Comendador

Area: 1,567 km^2

Elías Piña, also called Comendador, is located in western Dominican Republic near the border with Haiti. The economy is mainly based on livestock and agriculture including sugarcane, cotton, coffee and fruit.

Municipality	Population
Comendador	26,077
Bánica	6,574
El Llano	8,399
Hondo Valle	10,659
Pedro Santana	7,336
Juan Santiago	4,393

Multi-Hazard Risk Rank: Low (24 of 32)

Lack of Resilience Rank: Very High (1 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	
Low		Very High		Very Low		Very High		Very Low	
Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)	Score	Rank (of 32)
0.490	24	0.682	1	0.105	32	0.606	4	0.242	32

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure[1] Rank: 32 of 32 Provinces (Score: 0.105)

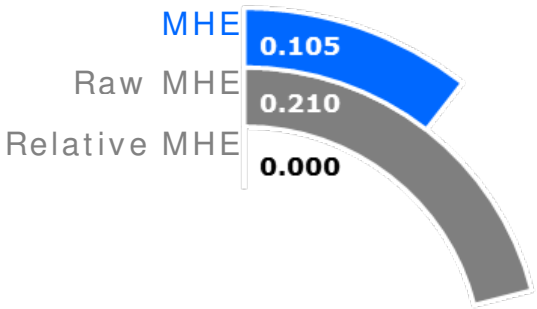
Table 2. Estimated ambient population[2] exposed to each hazard

Cyclone	100%	92,668 People
Earthquake	9%	7,987 People
Landslide	61%	56,419 People
Flood	5%	4,386 People
Tsunami	0%	0 People

Case Study: Improving Health and Relations at the Border

The province of Elías Piña sits within a few miles of the river which separates the Dominican Republic from neighboring Haiti. Despite being the poorest province in the country, Elías Piña still works to aid its neighbor. Through organization like Socios En Salud and the Dominican Ministry of Health, Haitians are able to access health care, community outreach, and testing for HIV in the Dominican border town. The province of Elías Piña understands how inextricably linked the Dominican Republic is with its western neighbor, and actively serves as a strong example of how to increase community resilience across borders.

"Crossing Rivers—and Cultural Bounds—in the Dominican Republic" – Partners in Health, 23 May 2013



[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: 4 of 32 Provinces (Score: 0.606) Vulnerability in Elías Piña is very strongly influenced by Economic Constraints, Information Access Vulnerability, and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

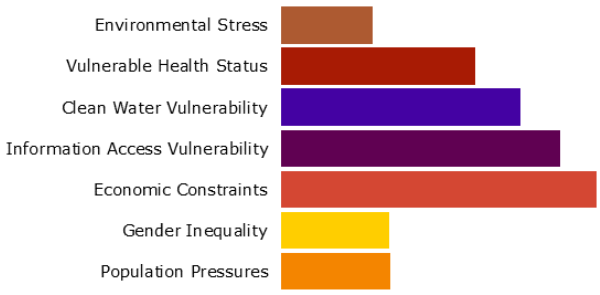


Table 3. Component Scores for each Vulnerability Sub-component

Environmental Stress	4.6% Province Susceptible to Drought	-2.1% Average Annual Forest Change					
Vulnerable Health Status	13.9 Infant Mortality Rate	NO DATA Maternal Mortality Rate	22.7 Chronic Malnutrition	7.4% Population Disabled			
Clean Water Vulnerability	26.4% Households without Access to Improved Water	24.3% Households without Access to Flush Toilets					
Information Access Vulnerability	35.8% Illiteracy	88.5% Primary School Enrollment	98.3% Households without Internet	58.3% Households without TV	68.5% Households without Radio	4.1 Average years of Schooling	
Economic Constraints	88.2 Economic Dependency Ratio	83.8% Population in Poverty	57.6% CEP Beneficiaries				
Gender Inequality	39.8% Female Seats in Government	1.04 Female to Male Years of Schooling	0.50 Female to Male Labor Ratio				
Population Pressures	0.05% Average Annual Population Change	3.9% Average Annual Urban Population Change					

[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: 32 of 32 Provinces (Score: 0.242) Elías Piña's weakest relative scores are in Economic Capacity and Infrastructure (Transportation and Communications). The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

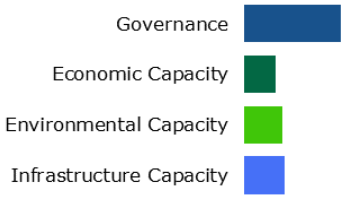


Table 4. Component Scores for each Coping Capacity Sub-component

Economic Capacity	0.93 Debt to Service Ratio	86.4% Employment Rate (Male)	RD$ 11,070 Average Annual Income per Capita			
Governance	78.3% Registered Voter Participation (2016 Election)	17.3 Homicide Rate per 100k persons	40.2% Households with Garbage Collection			
Environmental Capacity	11.9% Protected or Reforested Land					
Infrastructure Capacity						
Health Care Capacity	18.9 Hospital Beds per 10,000 Persons	25.7 Nurses per 10,000 Persons	15.6 Physicians per 10,000 Persons	4.9 km Average Distance to Nearest Hospital	0.65 Vaccination Index[5]	
Communications Capacity	3.4% Households with Access to Fixed Phone Line	54.2% Households with Access to Mobile Phone				
Transportation Capacity	69.6 km Average Distance to Nearest Port or Airport	0.23 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 Resilience[6] Rank: 1 of 32 Provinces (Score: 0.682)

Elías Piña's score and ranking are due to very high Vulnerability combined with very low Coping Capacity scores. Elías Piña has the 4th highest Vulnerability and the lowest Coping Capacity.

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

Economic Constraints	Communications Infrastructure Capacity	Transportation Infrastructure Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk[7] Rank: 24 of 32 Provinces (Score: 0.490)

Elías Piña's score and ranking are driven primarily by the combination of very high Vulnerability with very low Coping Capacity.

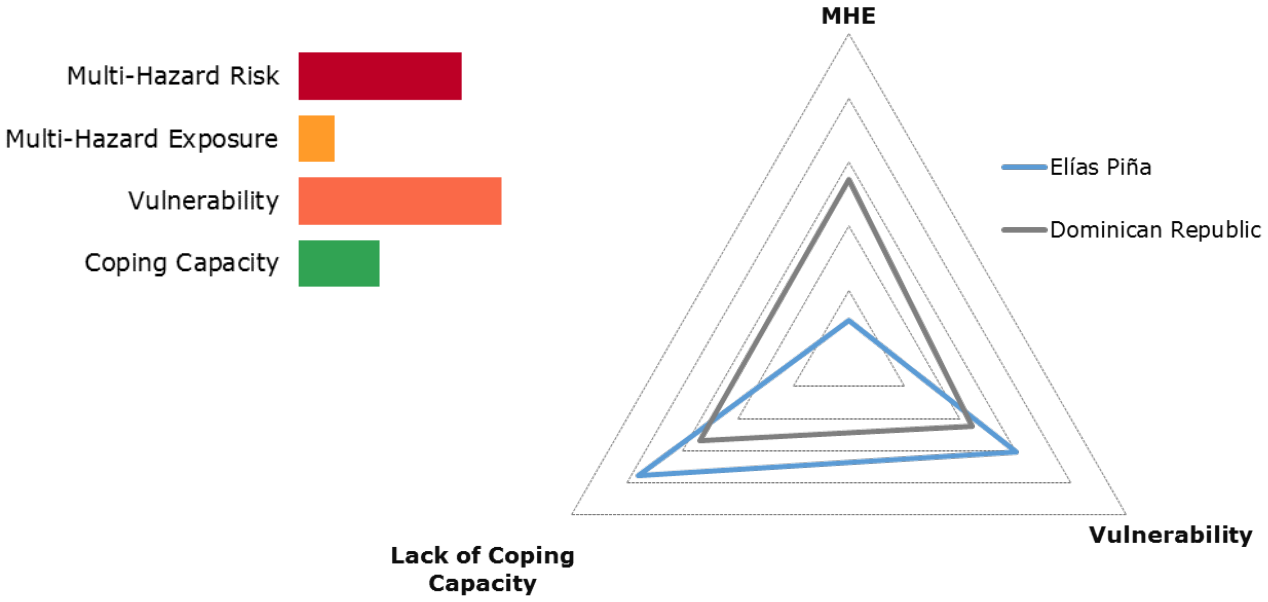


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

[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 gender inequality

Ranked 31 of 32 provinces, low gender inequality indicates that vulnerable populations are more likely to have their needs met under 'normal' conditions and may be less susceptible during times of disaster.

Recommendations

01

Alleviate economic constraints

Focus investments to reduce poverty and encourage business development and education programs to increase stable and viable economic opportunities in the region.

02

Invest in infrastructure

Limited infrastructure inhibits the capacity to communicate and exchange information, reduces access to health care and limits the physical distribution of goods and services. Health care, transportation, and communication infrastructures require upgrading and investment to increase connectivity and welfare in the province. Focused investments in these areas will increase coping capacity and resilience.