

Better solutions.
Fewer disasters.
Safer world.



Monte Plata

Dominican Republic National Disaster Preparedness
Baseline Assessment
Province Profile

Findings: Risk and Vulnerability Assessment (RVA)

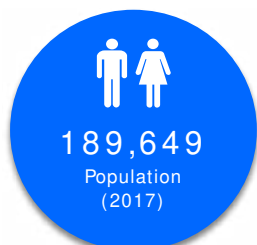
Province: Monte Plata

Province Capital: Monte Plata

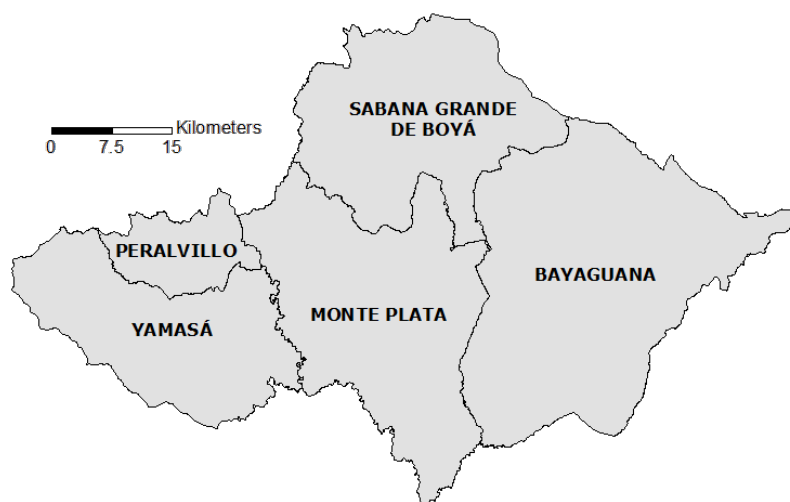


Area: 2,921 km²

Located in the eastern region of the country, Monte Plata is known for agriculture and possesses a wealth of folkloric elements and rich culture.



| Municipality | Population |
|-----------------------|------------|
| Monte Plata | 47,652 |
| Bayaguana | 32,521 |
| Sabana Grande De Boya | 31,713 |
| Yamasá | 56,447 |
| Peralvillo | 21,316 |



**Multi-Hazard Risk Rank:
Very High (3 of 32)**

**Lack of Resilience Rank:
Very High (7 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 | |
|-------------------|--------------|--------------------|--------------|-----------------------|--------------|---------------|--------------|-----------------|--------------|
| Very High | | Very High | | Medium | | High | | Very Low | |
| Score | Rank (of 32) | Score | Rank (of 32) | Score | Rank (of 32) | Score | Rank (of 32) | Score | Rank (of 32) |
| 0.567 | 3 | 0.566 | 7 | 0.569 | 16 | 0.497 | 10 | 0.365 | 29 |

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 16 of 32 Provinces (Score: 0.569)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

216,438 People



Earthquake

100%

216,438 People



Landslide

61%

131,619 People



Flood

27%

57,582 People



Tsunami

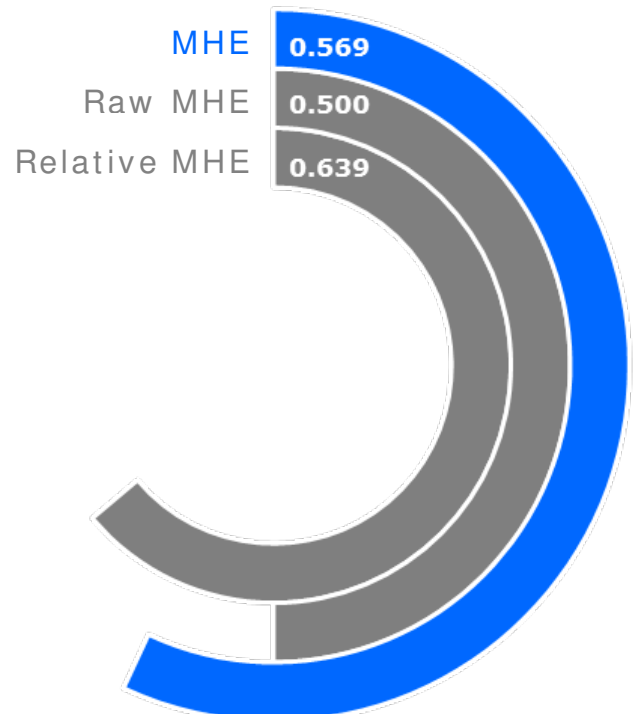
0%

0 People

Case Study: Ozama River Flooding in Monte Plata

In April 2017, the province of Monte Plata experienced significant flooding, with more than 500 homes destroyed by overflow from the Ozama River. The flooding caused the evacuation of nearly 3,000 people from their homes, as well as significant impacts to local infrastructure. Dozens of communities became inaccessible as roads and bridges were washed away. In response to the floods, the Dominican Republic activated its Emergency Operations Center (COE) to issue warnings for landslides and additional flooding, providing a valuable service to the affected population.

"Flood in Dominican Republic" – International Space Charter Activation, 24 April 2017,
<https://disasterscharter.org/web/guest/activations/-/article/flood-in-dominican-republic-call-605->



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: 10 of 32 Provinces (Score: 0.497) Vulnerability in Monte Plata is influenced by Clean Water Vulnerability, Economic Constraints, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the Province's overall Vulnerability score.

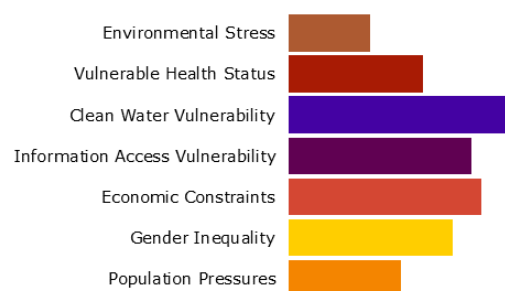









Table 3. Component Scores for each Vulnerability Sub-component

| | | | | | | | |
|---|---|--|---|--------------------------------------|--------------------------------|-----------------------------------|-----------------------------------|
|  | Environmental Stress | 0% Province Susceptible to Drought | -1.8% Average Annual Forest Change | | | | |
|  | Vulnerable Health Status | 15.8 Infant Mortality Rate | 132.0 Maternal Mortality Rate | 8.6 Chronic Malnutrition | 9.3% Population Disabled | | |
|  | Clean Water Vulnerability | 38.3% Households without Access to Improved Water | 15.8% Households without Access to Flush Toilets | | | | |
|  | Information Access Vulnerability | 17.6 Illiteracy | 88.4% Primary School Enrollment | 96.9% Households without Internet | 31.7% Households without TV | 59.2% Households without Radio | 5.7 Average years of Schooling |
|  | Economic Constraints | 64.6 Economic Dependency Ratio | 69.7% Population in Poverty | 40.1% CEP Beneficiaries | | | |
|  | Gender Inequality | 39.2% Female Seats in Government | 1.1 Female to Male Years of Schooling | 0.49 Female to Male Labor Ratio | | | |
|  | Population Pressures | 0.23% Average Annual Population Change | 2.4% 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: 29 of 32 Provinces (Score: 0.365) Monte Plata's weakest relative scores are Environmental Capacity, Communications Infrastructure, and Health Care Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.

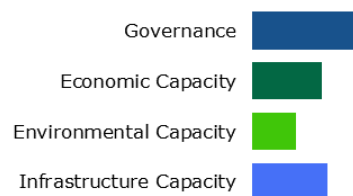









Table 4. Component Scores for each Coping Capacity Sub-component

| | | | | | | | |
|---|--------------------------------|--|---|---|--|---|---|
|  | Economic Capacity | 0.97 Debt to Service Ratio | 91.6% Employment Rate (Male) | RD\$ 15,957 Average Annual Income per Capita | | | |
|  | Governance | 79.7% Registered Voter Participation (2016 Election) | 15.4 Homicide Rate per 100k persons | 42.1% Households with Garbage Collection | | | |
|  | Environmental Capacity | 13.4% Protected or Reforested Land | | | | | |
|  | Infrastructure Capacity | | | | | | |
|  | Health Care Capacity | | 12.7 Hospital Beds per 10,000 Persons | 11.6 Nurses per 10,000 Persons | 14.1 Physicians per 10,000 Persons | 4.0 km Average Distance to Nearest Hospital | 0.14 Vaccination Index ⁵ |
|  | Communications Capacity | | 4.9% Households with Access to Fixed Phone Line | 67.0% Households with Access to Mobile Phone | | | |
|  | Transportation Capacity | | 30.0 km Average Distance to Nearest Port or Airport | 0.51 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: 7 of 32 Provinces (Score: 0.566)

Monte Plata's score and ranking are due to high Vulnerability combined with very low Coping Capacity scores. Monte Plata ranks 10th in Vulnerability and 29th in Coping Capacity.

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



Communications Infrastructure Capacity



Health Care Infrastructure Capacity



Clean Water Vulnerability

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 3 of 32 Provinces (Score: 0.567)

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

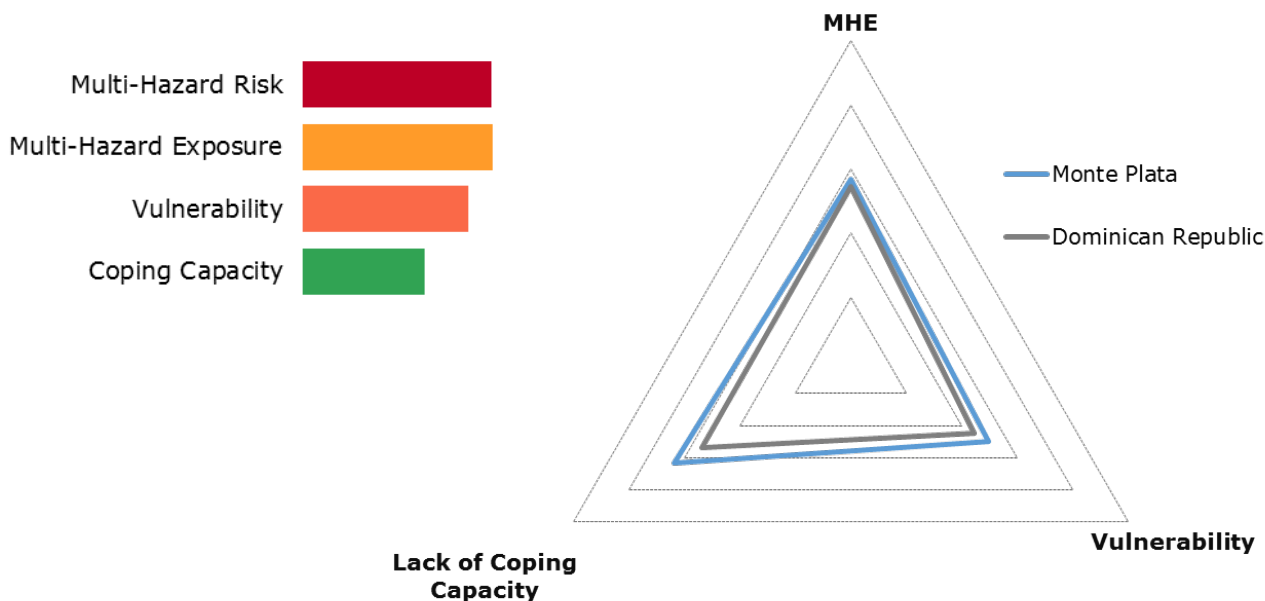


Figure 1. Province Multi-Hazard Risk Component Scores Compared to Overall Average Country Scores

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 population pressures

Ranked 22 of 32 provinces, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.



Low environmental stress

Ranked 24 of 32 provinces, low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.

Recommendations

01

Increase water and sanitation services

Invest in public water and waste facilities to increase water quality and access and reduce the spread of disease.

02

Invest in infrastructure

Invest in Health Care, Transportation and Communication Infrastructures to increase coping capacity and resiliency within the province.