Better solutions.
Fewer disasters.
Safer world.

PDC | GLOBAL

Guatemala: Baja Verapaz

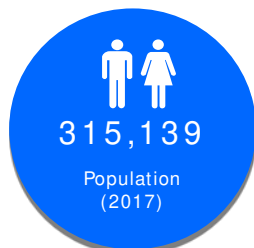National Disaster Preparedness Baseline Assessment – Department Profile

Department: Baja Verapaz

Department Capital: Salamá
Area: 3,124 km^2
Baja Verapaz is in central Guatemala to the north of Guatemala City. The region is dominated by the Chuacús Mountains and the economy is based on sugar cane, vegetables and grain production.

315,139
Population (2017)

66.3%
Population in Poverty

18.4%
Illiterate Adult Population

82.9%
Access to Improved Water

Municipality	Population
Cubulco	73,445
Purulhá	62,020
Salamá	61,882
Rabinal	39,386
San Miguel Chicaj	31,190
San Jerónimo	25,932
Granados	11,574
El Chol	9,710

Multi-Hazard Risk Rank:
Low (17 of 22)

Lack of Resilience Rank:
Low (15 of 22)

RVA Component Scores

Table 1. Department scores and ranks (compared across departments) for each index

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Low		Low		Low		Moderate		High	
Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)
0.469	17	0.497	15	0.413	15	0.500	9	0.507	7

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure[1] Rank: 15 of 22 Departments (Score: 0.413)

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

Cyclone
11%
31,853 People

Earthquake
100%
283,423 People

Volcano
96%
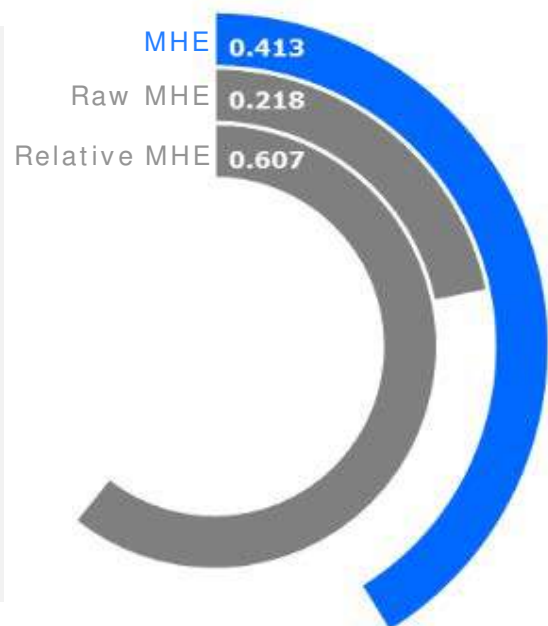272,953 People

Flood
10%
28,128 People

Landslide
11%
31,296 People

The Quetzal Biotope (a.k.a. Mario Dary Rivera Nature Reserve)

The Quetzal Biotope, officially known as the Mario Dary Rivera Nature Reserve, is one of the most fascinating nature reserves in Guatemala, protecting 3,000 acres of cloud forest and many species of flowers, butterflies, and birds, including the national bird, the quetzal. Established in 1977 to protect Guatemala's rapidly shrinking cloud forest and its inhabitants, the nature reserve has been under the administration of the San Carlos University, which has made the Quetzal Biotope one of the country's top destinations for nature lovers and bird watchers.

http://www.sailing-diving-guatemala.com/guatemala/quetzal-biotope.php

MHE	0.413
Raw MHE	0.218
Relative MHE	0.607

---

[1] **Multi-Hazard Exposure**: Average exposure of the population to hazards.

[2] **Ambient Population**: 24-hour average estimate of the population in each department. Ambient population typically differs from census population.

Vulnerability (V)

Vulnerability[3] Rank: 9 of 22 Departments (Score: 0.500) Vulnerability in Baja Verapaz is primarily driven by Information Access Vulnerability and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.
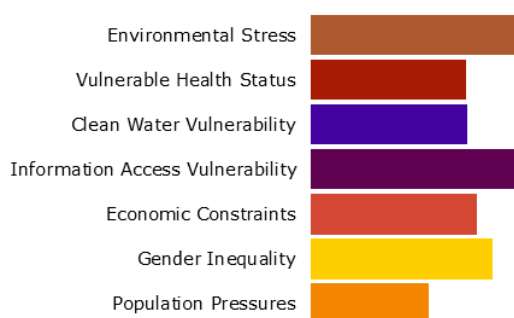

Table 3. Component scores for each Vulnerability sub-component

Environmental Stress	70.5% Province at Drought Risk	-1.5% Annual Forest Change					
Vulnerable Health Status	22 Infant Mortality Rate	137.9 Maternal Mortality Ratio	0.6% Acute Malnutrition	7.6% Population Disabled	7.5 TB Incidence	4.1 Dengue Prevalence	26.3 Malaria Prevalence
Clean Water Vulnerability	82.9% Households with Access to Improved Water	45.8% Households with Access to Improved Sanitation					
Information Access Vulnerability	18.4% Adult Illiteracy	5.0 Average Years of Schooling	79.5% Primary School Enrollment	2.9% Households with Internet	36.9% Households with Cable TV	78.4% Households with Radio	55.8% Speak Indigenous Language
Economic Constraints	0.90 Economic Dependency Ratio	66.3% Population in Poverty	0.42 GINI Coefficient				
Gender Inequality	50.0% Female Seats in Congress	0.15 Ratio of Female to Male Secondary Education Enrollment	0.22 Ratio of Female to Male Economic Activity				
Population Pressures	2.9% Average Annual Population Change	1.8% Average Annual Urban Population Change	40.3% Food Insecurity				

---

[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: 7 of 22 Departments (Score: 0.507) Baja Verapaz displays a low level of Coping Capacity, which is attributable to low Governance and low Environmental Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.
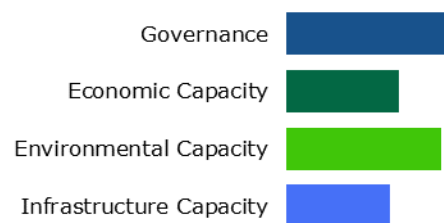

Table 4. Component scores for each Coping Capacity sub-component

Governance	**164.4** Crime Victims per 100K	**7.1%** Households with Garbage Collection			
Economic Capacity	**$872.3** Remittances per Capita (USD)	**8.3** Businesses per 1,000 persons	**7,174** GDP per Capita (Quetzales)		
Environmental Capacity	**14.4%** Protected Land	**3.5%** Reforested Area			
Infrastructure Capacity					
Health Care Capacity	**7.0** Hospital Beds per 10,000 Persons	**2.1** Nurses per 10,000 Persons	**2.1** Physicians per 10,000 Persons	**18.6 km** Average Distance to Nearest Hospital	**87.7%** Children Completed Immunization Schedule
Communications Capacity	**1.7%** Households with Access to Fixed Phone Line	**82.6%** Households with Access to Mobile Phone	**82.3%** Households with Access to Electricity		
Transportation Capacity	**37.7 km** Average Distance to Nearest Port or Airport	**24.8 km** Total Length of Road per 100 km² (area)			

---

[4] **Coping Capacity**: The systems, means, and abilities of a country to absorb and respond to events that could potentially disrupt normal function.

Lack of Resilience (LR)

Lack of Resilience[5] Rank: 15 of 22 Departments (Score: 0.497)

Baja Verapaz's score and ranking are due to moderate Vulnerability combined with high Coping Capacity scores.

Table 5. The 3 thematic areas with the weakest relative scores

Gender Inequality

Information Access Vulnerability

Governance

Multi-Hazard Risk (MHR)

Multi-Hazard Risk[6] Rank: 17 of 22 Departments (Score: 0.469)

Baja Verapaz's score and ranking are due to low Multi-Hazard Exposure combined with moderate Vulnerability and high Coping Capacity scores.
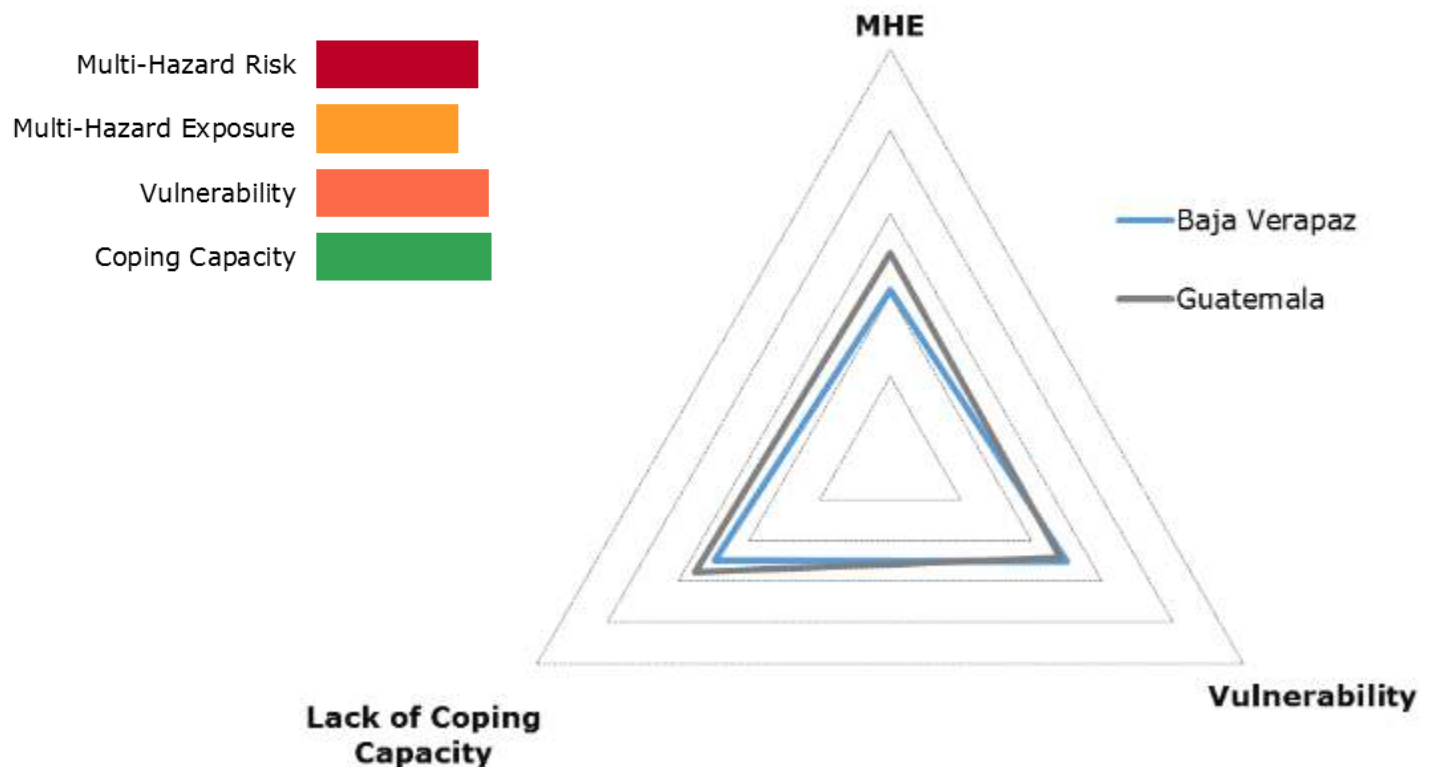

Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

---

[5] **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 socioeconomic conditions.

[6] **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 2 of 22 departments, high governance could facilitate the implementation of disaster management initiatives into departmental and municipal communities.

High environmental capacity

Ranked 3 of 22 departments, high environmental capacity indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.

Low economic constraints

Ranked 15 of 22 departments, low economic constraints indicate an increased ability to invest in mitigation and preparedness measures at the individual, household, and department level.

Recommendations

01
Provide opportunities for women

Public education and awareness programs that focus on increasing the role of women in the workplace and the society will improve resilience and decrease vulnerability.

02
Increase information accessibility

Increase access to information for the population through investments in infrastructure and education. By increasing citizen access to information, disaster managers can provide disaster-related information to a greater percentage of the population.

03
Increase government services

Investments in public services such as garbage collection, fire, and police will increase coping capacity and the department's ability to handle crises.

PDC | GLOBAL

Better solutions.
Fewer disasters.
Safer world.

NDPBA Guatemala Report
1305 N. Holopono Street, Suite 2
Kihei, Hawaii, 96753
Phone: (808) 891-0525 | Fax: (808) 891-0526

ndpba@pdc.org | www.pdc.org