

Better solutions.
Fewer disasters.
Safer world.



Guatemala: Quetzaltenango

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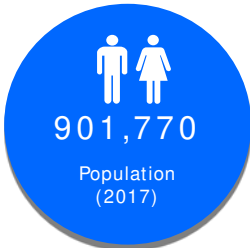
National Disaster Preparedness Baseline Assessment –
Department Profile

Department: Quetzaltenango



Department Capital: Quetzaltenango
 Area: 1,951 km²

Quetzaltenango is located in the western highlands region of Guatemala. Quetzaltenango has a wide-ranging climate due to elevation changes, resulting in a variety of fruits and vegetables grown in the region. Some of the poorer populations in the higher altitudes migrate to the Pacific lowlands to work in the coffee, sugarcane, and cotton plantations.



Municipality	Population
Quetzaltenango	164,486
Coatepeque	151,088
San Juan Ostuncalco	58,128
Cantel	48,484
Génova	46,041
Colomba	41,558
Olintepeque	39,989
San Carlos Sija	39,100
La Esperanza	35,381
Flores Costa Cuca	32,066
El Palmar	31,776
San Martín Sacatepéquez	28,965
Cabricán	28,935
Salcajá	20,413
Almolonga	19,976
Concepción Chiquirichapa	19,263
Huitán	17,209
San Mateo	13,987
Palestina de los Altos	13,552
Zunil	13,478
San Miguel Sigüilá	11,598
Cajolá	10,349



Multi-Hazard Risk Rank: Moderate (14 of 22)

Lack of Resilience Rank: Very Low (19 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	
Moderate		Very Low		Very High		Moderate		Very High	
Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)
0.505	14	0.410	19	0.694	4	0.440	14	0.619	1

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 4 of 22 Departments (Score: 0.694)

Table 2. Estimated ambient population² exposed to each hazard



Cyclone

100%

820,882 People



Earthquake

100%

820,882 People



Volcano

60%

494,559 People



Flood

11%

88,050 People



Landslide

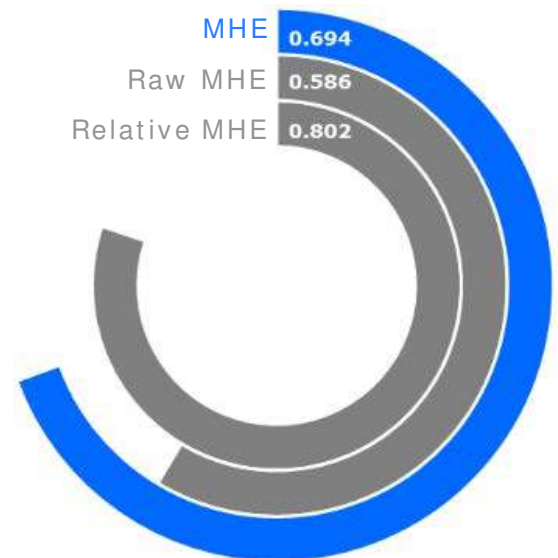
7%

59,968 People

Global Health Initiative

In places like Cajola, Quetzaltenango, the United States Global Health Initiative (GHI) is focusing on hunger and malnutrition. GHI is targeting Mayan women and children in the mostly indigenous Western Highlands, a mountainous area with a single maize harvest per year. The cornerstone of the strategy is reducing one of the highest rates of chronic malnutrition in the world. According to the United Nations Children's Fund, only Afghanistan and Yemen fare worse. Half of all Guatemalan children under five have stunted growth, and in the Western Highlands, it's seven out of 10.

*GHI targets chronic malnutrition in Guatemala, July 18, 2011
By Lomi Kriel*



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.

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Vulnerability (V)

Vulnerability³ Rank: 14 of 22 Departments (Score: 0.440) Vulnerability in Quetzaltenango is primarily driven by Gender Inequality and Economic Constraints. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

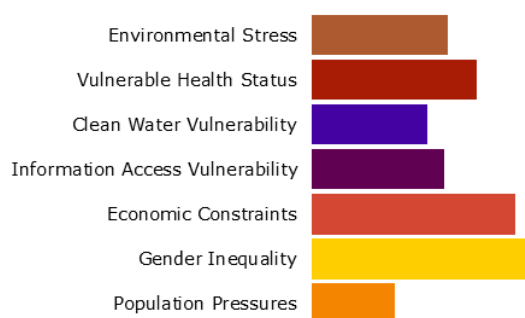









Table 3. Component scores for each Vulnerability sub-component

	Environmental Stress	41.3% Province at Drought Risk	-0.14% Annual Forest Change					
	Vulnerable Health Status	29 Infant Mortality Rate	93.8 Maternal Mortality Ratio	1.0% Acute Malnutrition	1.5% Population Disabled	19.8 TB Incidence	11.0 Dengue Prevalence	9.0 Malaria Prevalence
	Clean Water Vulnerability	83.2% Households with Access to Improved Water	61.7% Households with Access to Improved Sanitation					
	Information Access Vulnerability	14.4% Adult Illiteracy	6.2 Average Years of Schooling	80.6% Primary School Enrollment	10.0% Households with Internet	47.8% Households with Cable TV	88.6% Households with Radio	51.7% Speak Indigenous Language
	Economic Constraints	0.79 Economic Dependency Ratio	56.0% Population in Poverty	0.58 GINI Coefficient				
	Gender Inequality	0.0% Female Seats in Congress	0.04 Ratio of Female to Male Secondary Education Enrollment	0.26 Ratio of Female to Male Economic Activity				
	Population Pressures	2.9% Average Annual Population Change	1.2% Average Annual Urban Population Change	33.5% Food Insecurity				

³ **Vulnerability:** The socioeconomic conditions that are associated with the susceptibility to disruptions in a country's normal functions.

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Coping Capacity (CC)

Coping Capacity⁴ Rank: 1 of 22 Departments (Score: 0.619) Quetzaltenango displays the country's highest Coping Capacity, due to very high Economic Capacity, Governance, and Infrastructure Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

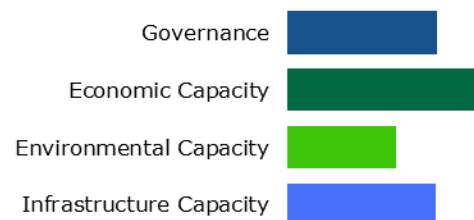


Table 4. Component scores for each Coping Capacity sub-component

	Governance	218.7 Crime Victims per 100K	33.34% Households with Garbage Collection				
	Economic Capacity	551.2 Remittances per Capita (USD)	24.2 Businesses per 1,000 persons	18,140 GDP per Capita (Quetzales)			
	Environmental Capacity	9.42% Protected Land	2.22% Reforested Area				
	Infrastructure Capacity						
	Health Care Capacity	11.2 Hospital Beds per 10,000 Persons	8.11 Nurses per 10,000 Persons	7.89 Physicians per 10,000 Persons	14.2Km Average Distance to Nearest Hospital	85.4% Children Completed Immunization Schedule	
	Communications Capacity	10.1% Households with Access to Fixed Phone Line	82.1% Households with Access to Mobile Phone	99.1% Households with Access to Electricity			
	Transportation Capacity	15.8 km Average Distance to Nearest Port or Airport	35.0 km Total Length of Road per 100 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.

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Lack of Resilience (LR)

Lack of Resilience⁵ Rank: 19 of 22 Departments (Score: 0.410)

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

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



Gender Inequality



Economic Constraints



Vulnerable Health Status

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁶ Rank: 14 of 22 Departments (Score: 0.505)

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

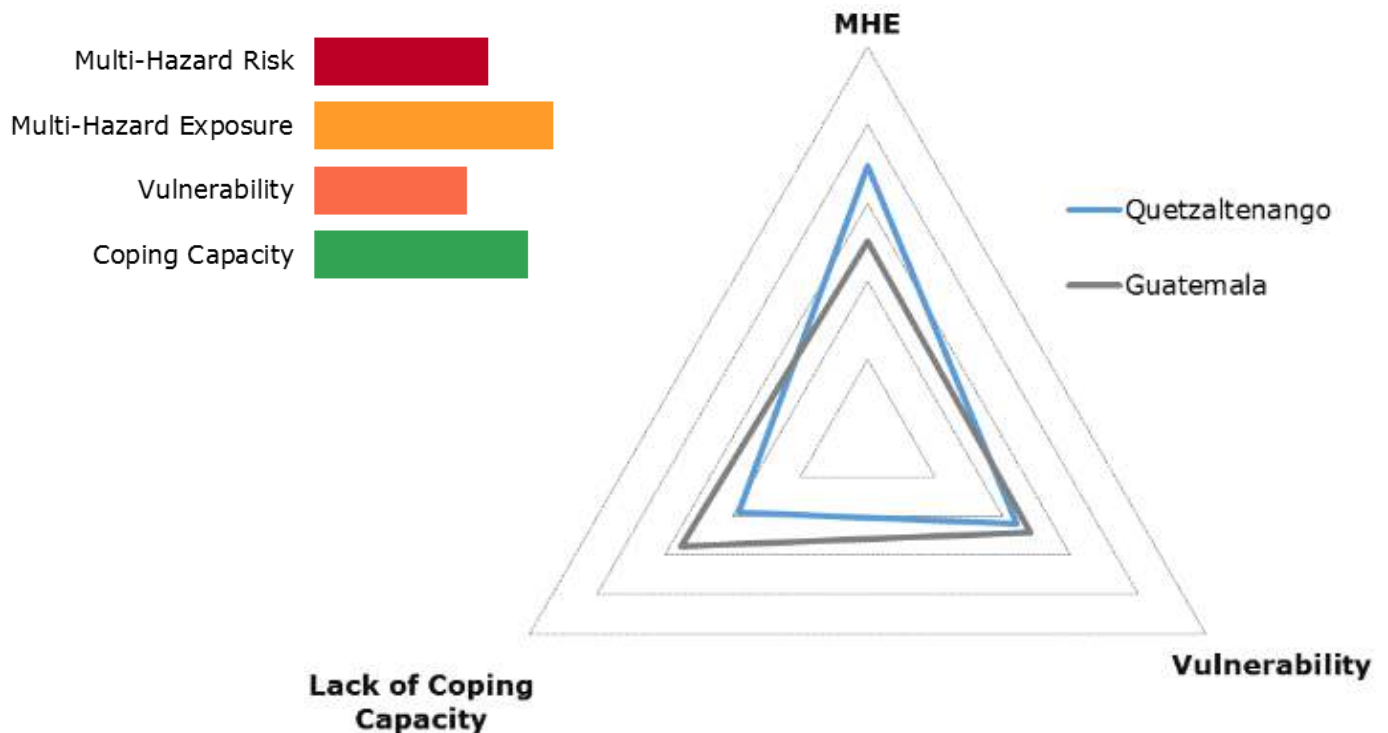


Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

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



Highest economic capacity

Ranked 1 of 22 departments, high economic capacity indicates that Quetzaltenango may be able to invest in additional mitigation and preparedness measures at the local and community level.



Low population pressures

Ranked 19 of 22 departments, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.



Low clean water vulnerability

Ranked 18 of 22 departments, low clean water vulnerability indicates that a population has access to high water quality and good containment systems, reducing susceptibility to disaster.

Recommendations

01

Provide opportunities for women

Public education and awareness programs, as well as increased business and political opportunities that focus on advancing the role of women in the workplace and society, will increase the resilience of vulnerable populations.

02

Increased economic opportunity

Provide education and government-backed incentivized business programs to promote business development and growth, ultimately decreasing vulnerability within the department.

03

Increase health education

Provide health-education services for the population, especially new mothers and other special needs populations.



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