

Better solutions.
Fewer disasters.
Safer world.



Guatemala: Totonicapán

Image: Google

National Disaster Preparedness Baseline Assessment –
Department Profile

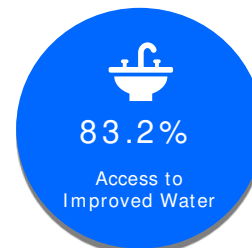
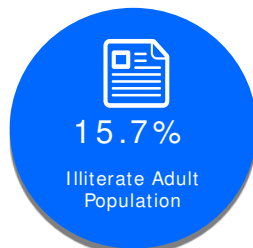
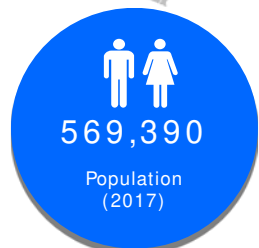
Department: Totonicapán



Department Capital: Totonicapán

Area: 1,061 km²

Totonicapán is located in the western highlands region of Guatemala and is known for its extensive highland oak-pine forests. Approximately 97% of the population identify as indigenous of Mayan descent.



Municipality	Population
Totonicapán	152,893
Momostenango	149,840
San Francisco el Alto	75,771
Santa María Chiquimula	54,997
San Andrés Xecul	42,101
San Cristóbal Totonicapán	41,306
Santa Lucía la Reforma	27,217
San Bartolo	25,263



Multi-Hazard Risk Rank:
Very High (2 of 22)

Lack of Resilience Rank:
Very High (4 of 22)

RVA Component Scores

Table 14. Department scores and ranks (compared across departments) for each index

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		Very High		High		Very High		Moderate	
Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)
0.629	2	0.601	4	0.684	5	0.640	2	0.438	11

NDPBA Guatemala Report: Department Profile

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 5 of 22 Departments (Score: 0.684)

Table 25. Estimated ambient population² exposed to each hazard



Cyclone

100%

435,130 People



Earthquake

100%

435,130 People



Volcano

94%

410,304 People



Flood

5%

20,673 People



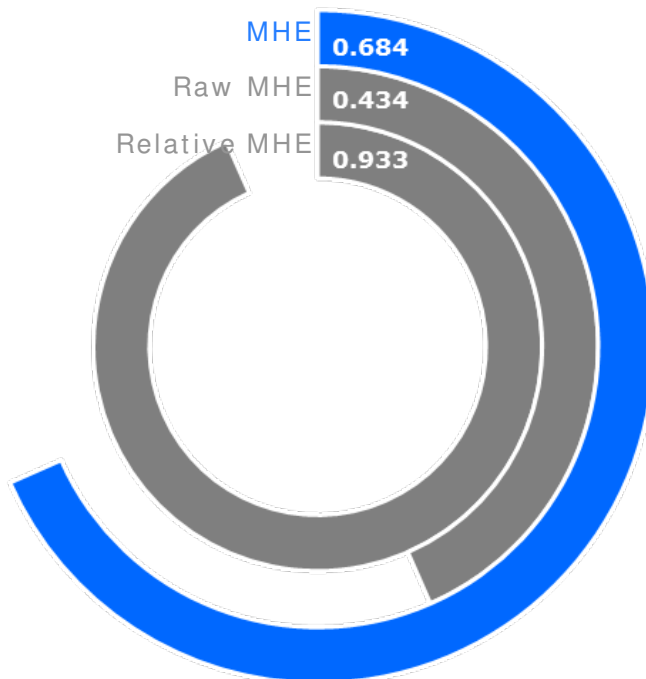
Landslide

13%

55,892 People

Promoting Alternative Crops in Rural Communities of Totonicapán

In June 2016, the Inter-American Development Bank completed a project promoting alternative crop development in Guatemala. Traditionally, communities produced the same, uncompetitive crops, resulting in malnutrition and minimal income. The program, at a cost of just under \$750,000 USD, was designed to improve living conditions of small, rural agricultural communities in Guatemala.



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.

NDPBA Guatemala Report: Department Profile

Vulnerability (V)

Vulnerability³ Rank: 2 of 22 Departments (Score: 0.64) Vulnerability in Totonicapán is primarily driven by Information Access Vulnerability, Environmental Stress, and Economic Constraints. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

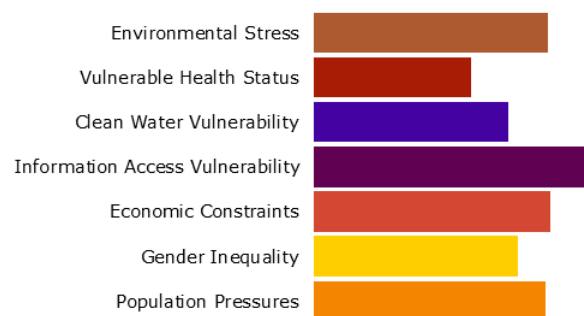









Table 16. Component scores for each vulnerability sub-component

	Environmental Stress	99.9% Province at Drought Risk	-0.04% Annual Forest Change					
	Vulnerable Health Status	35 Infant Mortality Rate	153.5 Maternal Mortality Ratio	0.5% Acute Malnutrition	3.6% Population Disabled	2.6 TB Incidence	8.2 Dengue Prevalence	14.9 Malaria Prevalence
	Clean Water Vulnerability	83.2% Households with Access to Improved Water	30.1% Households with Access to Improved Sanitation					
	Information Access Vulnerability	15.7% Adult Illiteracy	4.6 Average Years of Schooling	62.7% Primary School Enrollment	2.0% Households with Internet	29.0% Households with Cable TV	78.9% Households with Radio	97.0% Speak Indigenous Language
	Economic Constraints	1.01 Economic Dependency Ratio	77.5% Population in Poverty	0.45 GINI Coefficient				
	Gender Inequality	0.0% Female Seats in Congress	0.004 Ratio of Female to Male Secondary Education Enrollment	0.28 Ratio of Female to Male Economic Activity				
	Population Pressures	4.5% Average Annual Population Change	3.15% Average Annual Urban Population Change	52.0% Food Insecurity				

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

NDPBA Guatemala Report: Department Profile

Coping Capacity (CC)

Coping Capacity⁴ Rank: 11 of 22 Departments (Score: 0.438) Totonicapán displays a moderate level of Coping Capacity, which is attributable to low Economic Capacity and Transportation Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

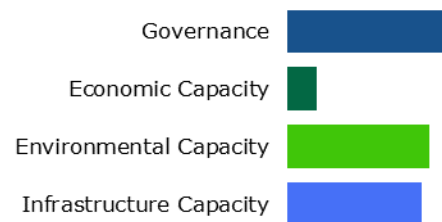









Table 3. Component Scores for each Coping Capacity Sub-component

	Governance	70.7 Crime Victims per 100K	14.4% Households with Garbage Collection			
	Economic Capacity	\$255.3 Remittances per Capita (USD)	6.71 Businesses per 1,000 persons	6,255 GDP per Capita (Quetzales)		
	Environmental Capacity	12.32% Protected Land	3.17% Reforested Area			
	Infrastructure Capacity					
	Health Care Capacity	1.07 Hospital Beds per 10,000 Persons	1.87 Nurses per 10,000 Persons	2.73 Physicians per 10,000 Persons	33.2 Km Average Distance to Nearest Hospital	84.5% Children Completed Immunization Schedule
	Communications Capacity	6.3% Households with Access to Fixed Phone Line	76.6% Households with Access to Mobile Phone	98.2% Households with Access to Electricity		
	Transportation Capacity	19.6 km Average Distance to Nearest Port or Airport	54.9 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.

NDPBA Guatemala Report: Department Profile

Lack of Resilience (LR)

Lack of Resilience⁵ Rank: 4 of 22 Departments (Score: 0.601)

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

Table 18. The 3 thematic areas with the weakest relative scores



Information
Access
Vulnerability



Economic
Capacity



Economic
Constraints

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁶ Rank: 2 of 22 Departments (Score: 0.629)

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

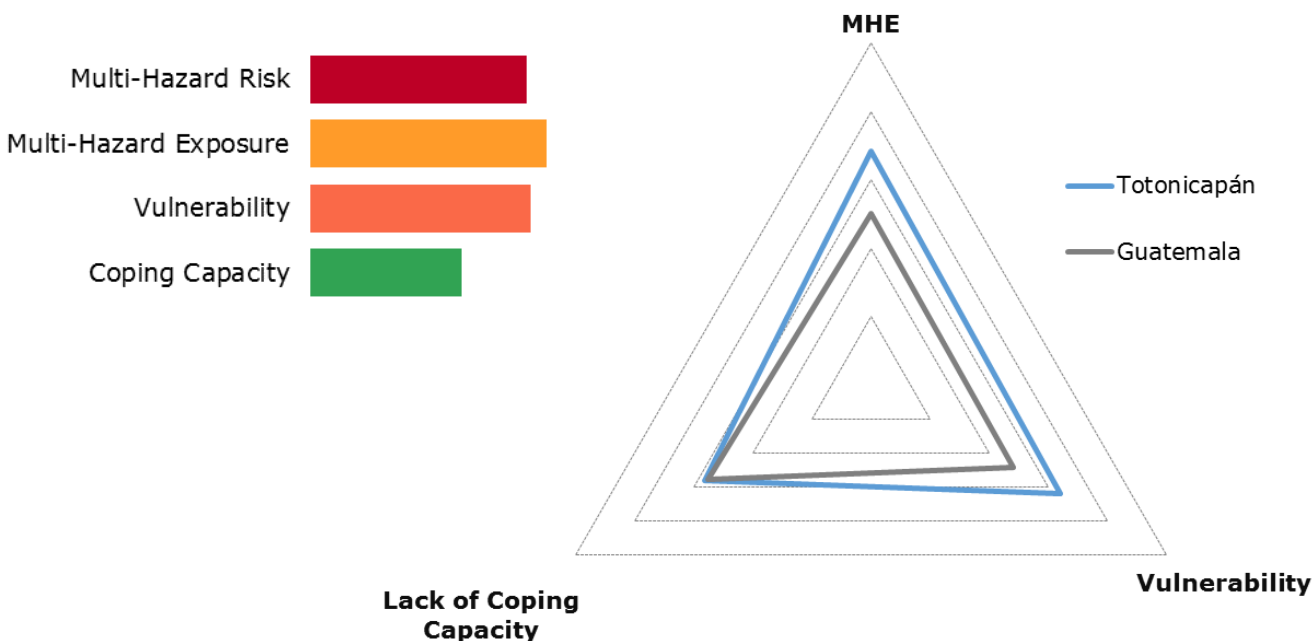


Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

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 4 of 22 departments, high governance could facilitate the implementation of disaster management initiatives into departmental and municipal communities.



High transportation capacity

Ranked 4 of 22 departments, well developed transportation networks facilitate the movement of goods and services, decreasing wait times for response and relief supplies.

Recommendations

01

Invest in communication infrastructure

Invest in communication infrastructure to allow for easier access to disaster-related information and education material, increasing literacy and situational awareness of the population.

02

Increase healthcare availability

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



Better solutions.
Fewer disasters.
Safer world.

NDPBA Guatemala Report
1305 N. Holocono Street, Suite 2
Kihei, Hawaii, 96753
Phone: (808) 891-0525 | Fax: (808) 891-0526
ndpba@pdc.org | www.pdc.org

© 2018 Pacific Disaster Center