

**Better solutions.
Fewer disasters.
Safer world.**



Image: Google

Guatemala: Petén

**National Disaster Preparedness Baseline Assessment –
Department Profile**

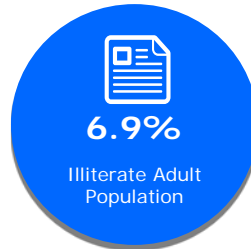
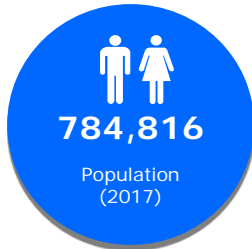
Department: Petén



Department Capital: Flores

Area: 35,854 km²

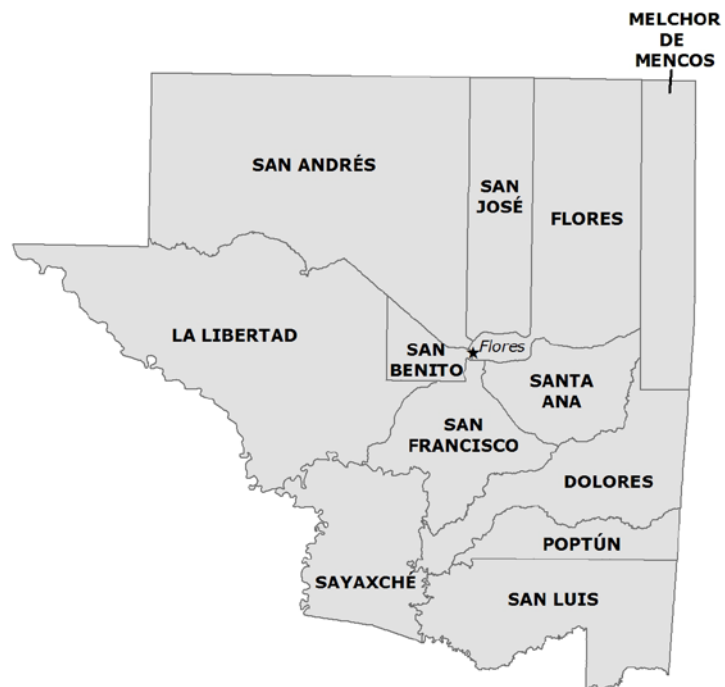
Petén is the northernmost and largest department in Guatemala, and borders Mexico to the north and Belize to the east. While Petén has the highest percentage of protected area in the country, illegal logging and farming operations continue to place the protected areas at risk.



Municipality

Population

Sayaxché	141,487
La Libertad	138,236
San Luis	87,031
Poptún	76,941
San Benito	72,447
Flores	70,142
Dolores	55,631
San Andrés	53,333
Santa Ana	40,871
Melchor de Mencos	21,865
San Francisco	20,625
San José	6,208



**Multi-Hazard Risk Rank:
Very Low (20 of 22)**

**Lack of Resilience Rank:
Very High (2 of 22)**

RVA Component Scores

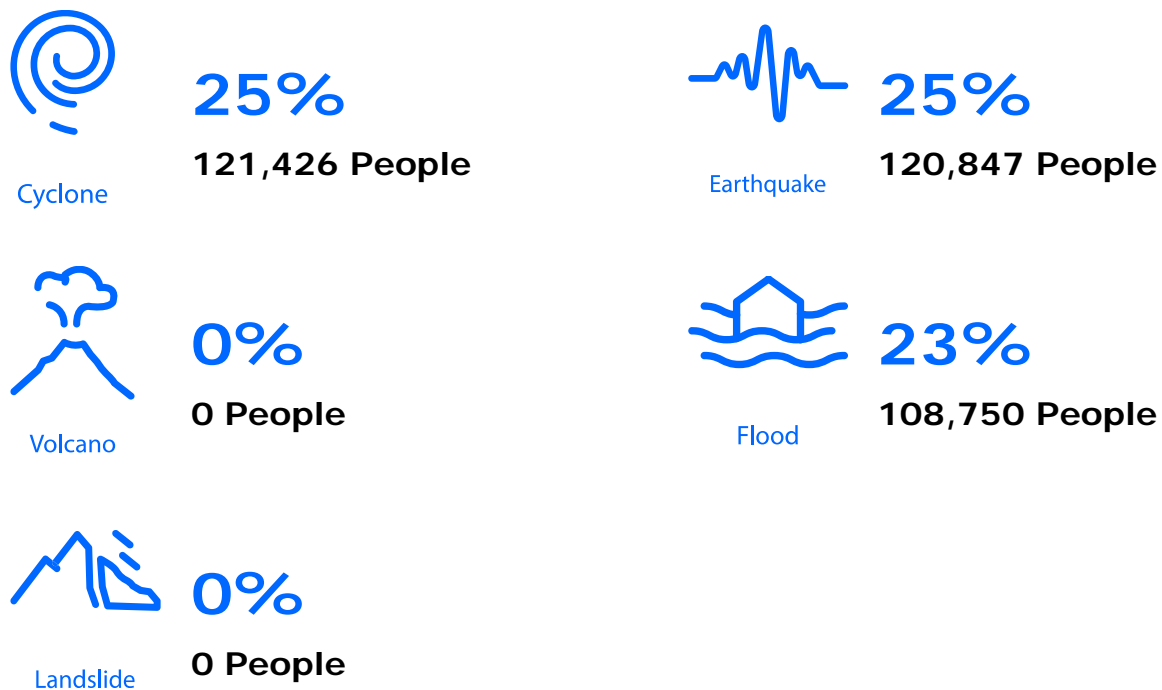
Table 1. Department scores and ranks (compared across departments) for each index

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very Low		Very High		Very Low		Very High		Very Low	
Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)
0.442	20	0.653	2	0.020	22	0.612	3	0.306	22

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 22 of 22 Departments (Score: 0.020)

Table 2. Estimated ambient population² exposed to each hazard



Balancing Conservation and Progress

The northern third of the Petén Department is protected by the Maya Biosphere Reserve, but deforestation is still common in the area, attributable to growing population and land grabs. Despite its designation as a reserve, pressure continue to rise to develop the area to support the ever-increasing population and food insecurities. Forests are cut down to in a practice known as slash-and-burn agriculture. The forests are chopped down and burned, providing temporarily nutrient-rich ash and soil for crop production. When the soil becomes unproductive, new sections of the forest must be cut down and turned into farmland. The cycle continues, and each year more forests become wasteland.

The southern and central sections of the department are almost completely deforested, which has led to declines in annual rainfall and longer/warmer dry seasons.

<https://www.anywhere.com/guatemala/travel-guide/environmental-issues>



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)

Vulnerability³ Rank: 3 of 22 Departments (Score: 0.612) Vulnerability in Petén is primarily driven by Population Pressures, Gender Inequality, and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

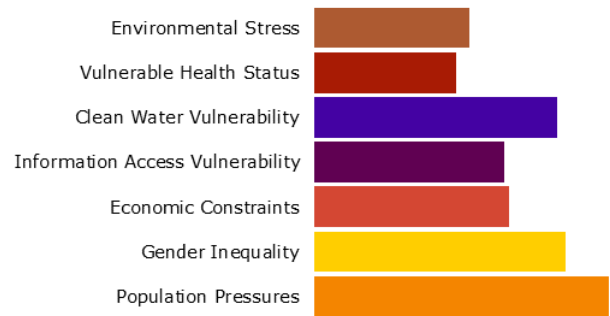









Table 3. Component scores for each Vulnerability sub-component

	Environmental Stress	26.4% Province at Drought Risk	-2.1% Annual Forest Change					
	Vulnerable Health Status	19 Infant Mortality Rate	87.1 Maternal Mortality Ratio	0.7% Acute Malnutrition	1.1% Population Disabled	12.9 TB Incidence	11.6 Dengue Prevalence	11.0 Malaria Prevalence
	Clean Water Vulnerability	67.2% Households with Access to Improved Water	31.6% Households with Access to Improved Sanitation					
	Information Access Vulnerability	6.9% Adult Illiteracy	5.3 Average Years of Schooling	60.5% Primary School Enrollment	5.2% Households with Internet	41.8% Households with Cable TV	73.8% Households with Radio	32.4% Speak Indigenous Language
	Economic Constraints	0.94 Economic Dependency Ratio	60.8% Population in Poverty	0.48 GINI Coefficient				
	Gender Inequality	0.0% Female Seats in Congress	0.10 Ratio of Female to Male Secondary Education Enrollment	0.20 Ratio of Female to Male Economic Activity				
	Population Pressures	7.8% Average Annual Population Change	7.6% Average Annual Urban Population Change	46.4% 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 Capacity⁴ Rank: 22 of 22 Departments (Score: 0.306) Petén displays a very low level of Coping Capacity, which is attributable to very low Infrastructure Capacity and very low Governance. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

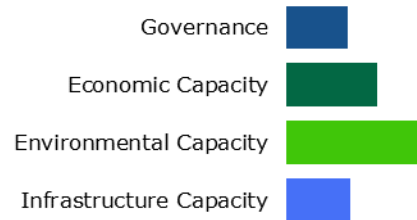


Table 4. Component scores for each Coping Capacity sub-component

	Governance	220.8 Crime Victims per 100K	1.9% Households with Garbage Collection			
	Economic Capacity	\$552.1 Remittances per Capita (USD)	10.27 Businesses per 1,000 persons	8,714.3 GDP per Capita (Quetzales)		
	Environmental Capacity	70.2% Protected Land	0.7% Reforested Area			
	Infrastructure Capacity					
	Health Care Capacity	5.5 Hospital Beds per 10,000 Persons	1.8 Nurses per 10,000 Persons	2.3 Physicians per 10,000 Persons	47.0 km Average Distance to Nearest Hospital	100% Children Completed Immunization Schedule
	Communications Capacity	3.1% Households with Access to Fixed Phone Line	81.6% Households with Access to Mobile Phone	66.6% Households with Access to Electricity		
	Transportation Capacity	33.6 km Average Distance to Nearest Port or Airport	4.6 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.

Lack of Resilience (LR)

Lack of Resilience⁵ Rank: 2 of 22 Departments (Score: 0.653)

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

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



Gender Inequality



Population Pressures



Infrastructure Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁶ Rank: 20 of 22 Departments (Score: 0.442)

Despite Petén's very high Vulnerability and very low Coping Capacity, Multi-Hazard Risk is very low due to very low Multi-Hazard Exposure.

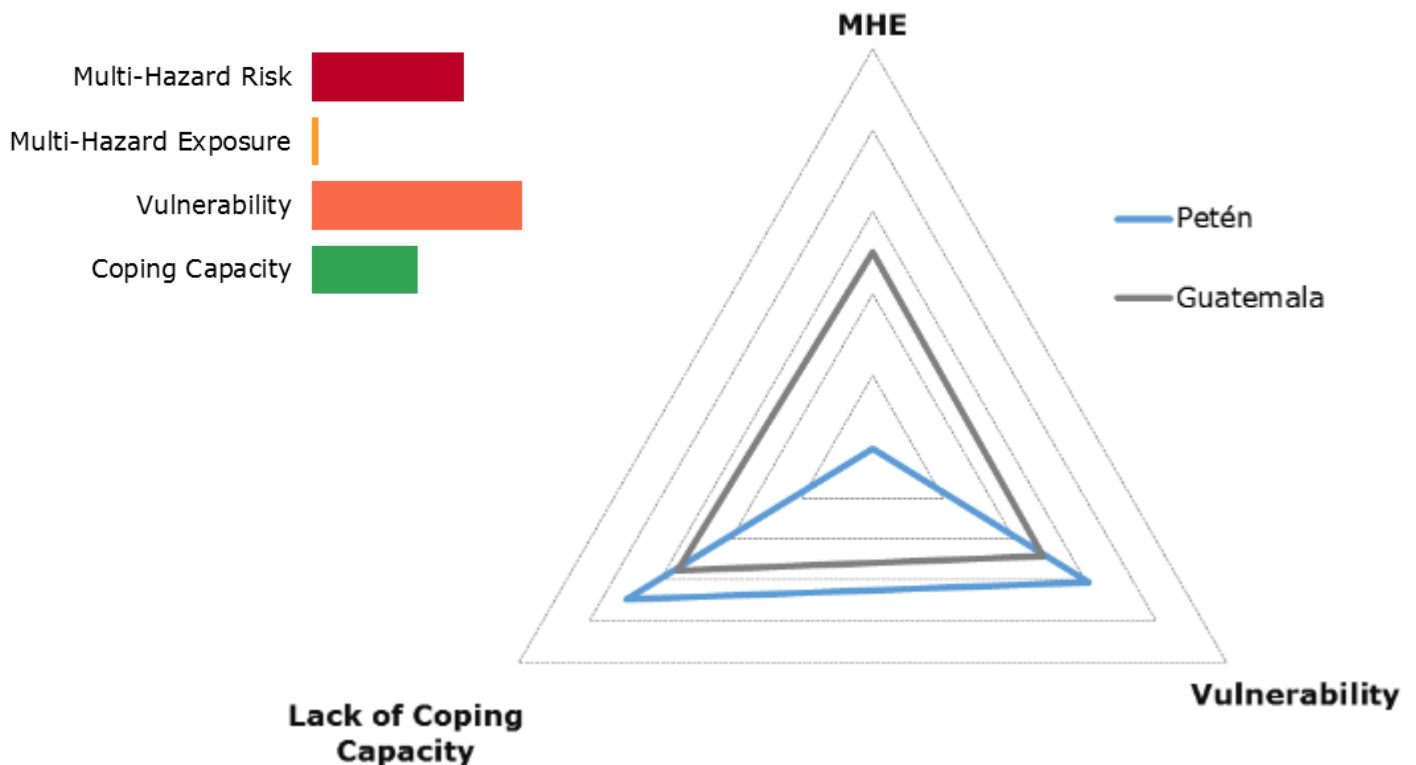


Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

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



Low vulnerable health status

Ranked 17 of 22 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



High environmental capacity

Ranked 6 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.

Recommendations

01

Invest in infrastructure

Investing in transportation infrastructure will facilitate the distribution of goods and services before, during, and after a disaster event.

02

Monitor and manage population influx

Invest in a program to manage population influx into the region. Petén's vast (protected) resources have caused an increase in corporate and individual farming and logging operations. Population-control measures must be enacted to control the influx in personnel as the infrastructure is not designed to handle it.

03

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.



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