

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



# Guatemala: Izabal

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

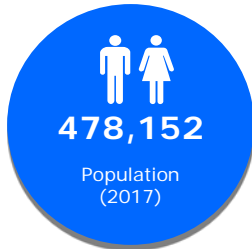
## Department: Izabal



Department Capital: Puerto Barrios

Area: 9,038 km<sup>2</sup>

Izabal is in eastern Guatemala and is bordered to the east by the Gulf of Honduras. The department surrounds Lago Izabal, the country's largest lake, which bisects the department. Puerto Barrios is the main Caribbean Sea port for Guatemala.



Municipality	Population
Morales	129,415
Puerto Barrios	115,260
El Estor	95,195
Livingston	71,858
Los Amates	66,424



**Multi-Hazard Risk Rank:  
Low (15 of 22)**

**Lack of Resilience Rank:  
Moderate (13 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		Moderate		Low		Moderate		Moderate	
Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)	Score	Rank (of 22)
0.470	15	0.501	13	0.407	16	0.441	12	0.439	10

## Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure<sup>1</sup> Rank: 16 of 22 Departments (Score: 0.407)

Table 2. Estimated ambient population<sup>2</sup> exposed to each hazard



**46%**

**189,461 People**

Cyclone



**100%**

**411,371 People**

Earthquake



**0%**

**0 People**

Volcano



**60%**

**245,212 People**

Flood



**<1%**

**223 People**

Landslide

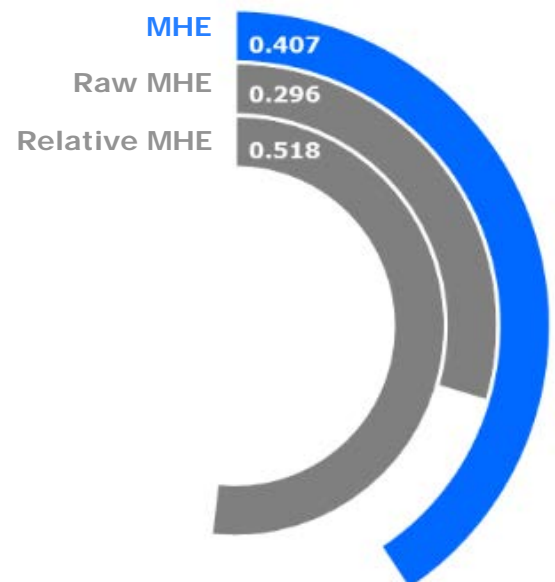
### Guatemala Earthquake of February 4, 1976

One of the most destructive earthquakes ever to strike Guatemala occurred on February 4, 1976. The magnitude 7.5 quake's hypocenter was located at a depth of 5 km near the town of Los Amates in the department of Izabal.

Cities throughout the country suffered damage, and most adobe-type houses in the outlying areas of Guatemala City were completely destroyed. The earthquake struck during the early morning when most people were asleep. This contributed to the high death toll of 23,000. Approximately 76,000 were injured, and many thousands left homeless. Some areas went without electricity and communication for days.

Transportation was impeded by landslides. Food and water supplies were severely reduced. The main shock was followed by thousands of aftershocks, some of the larger ones causing additional loss of life and damage.

<https://worldhistoryproject.org/1976/2/4/guatemala-earthquake>



<sup>1</sup> Multi-Hazard Exposure: Average exposure of the population to hazards.

<sup>2</sup> Ambient Population: 24-hour average estimate of the population in each department. Ambient population typically differs from census population.

## Vulnerability (V)

**Vulnerability<sup>3</sup> Rank: 12 of 22 Departments (Score: 0.441)** Vulnerability in Izabal is primarily driven by Vulnerable Health Status and Economic Constraints. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

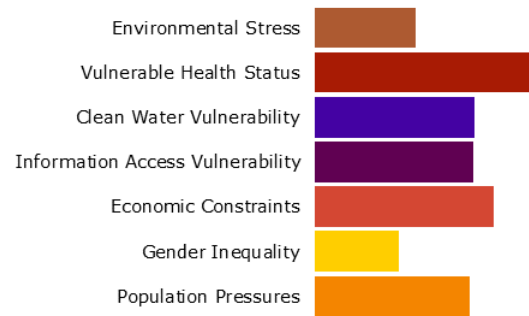









Table 3. Component scores for each Vulnerability sub-component

	<b>Environmental Stress</b>	<b>3.2%</b> Province at Drought Risk	<b>-1.5%</b> Annual Forest Change					
	<b>Vulnerable Health Status</b>	<b>23</b> Infant Mortality Rate	<b>224.4</b> Maternal Mortality Ratio	<b>1.2%</b> Acute Malnutrition	<b>1.5%</b> Population Disabled	<b>14.2</b> TB Incidence	<b>20.3</b> Dengue Prevalence	<b>17.2</b> Malaria Prevalence
	<b>Clean Water Vulnerability</b>	<b>68.6%</b> Households with Access to Improved Water	<b>62.6%</b> Households with Access to Improved Sanitation					
	<b>Information Access Vulnerability</b>	<b>16.9%</b> Adult Illiteracy	<b>5.9</b> Average Years of Schooling	<b>77.1%</b> Primary School Enrollment	<b>6.5%</b> Households with Internet	<b>48.8%</b> Households with Cable TV	<b>76.5%</b> Households with Radio	<b>26.9%</b> Speak Indigenous Language
	<b>Economic Constraints</b>	<b>0.80</b> Economic Dependency Ratio	<b>59.9%</b> Population in Poverty	<b>0.51</b> GINI Coefficient				
	<b>Gender Inequality</b>	<b>33.3%</b> Female Seats in Congress	<b>0.04</b> Ratio of Female to Male Secondary Education Enrollment	<b>0.08</b> Ratio of Female to Male Economic Activity				
	<b>Population Pressures</b>	<b>3.5%</b> Average Annual Population Change	<b>2.4%</b> Average Annual Urban Population Change	<b>43.2%</b> Food Insecurity				

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

## Coping Capacity (CC)

**Coping Capacity<sup>4</sup> Rank: 10 of 22 Departments (Score: 0.439)** Izabal displays a moderate level of Coping Capacity, which is attributable to low Infrastructure Capacity and moderate Economic and Environmental Capacities. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

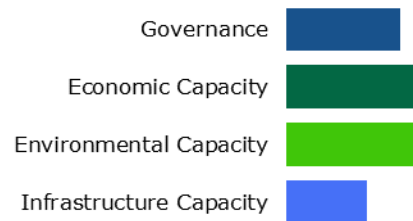









Table 4. Component scores for each Coping Capacity sub-component

	<b>Governance</b>	<b>298.3</b> Crime Victims per 100K	<b>15.3%</b> Households with Garbage Collection			
	<b>Economic Capacity</b>	<b>\$556.0</b> Remittances per Capita (USD)	<b>15.7</b> Businesses per 1,000 persons	<b>13,360.5</b> GDP per Capita (Quetzales)		
	<b>Environmental Capacity</b>	<b>30.5%</b> Protected Land	<b>1.6%</b> Reforested Area			
	<b>Infrastructure Capacity</b>					
	<b>Health Care Capacity</b>	<b>5.0</b> Hospital Beds per 10,000 Persons	<b>3.2</b> Nurses per 10,000 Persons	<b>2.55</b> Physicians per 10,000 Persons	<b>42.9 km</b> Average Distance to Nearest Hospital	<b>90.6%</b> Children Completed Immunization Schedule
	<b>Communications Capacity</b>	<b>9.7%</b> Households with Access to Fixed Phone Line	<b>73.5%</b> Households with Access to Mobile Phone	<b>85.3%</b> Households with Access to Electricity		
	<b>Transportation Capacity</b>	<b>20.4 km</b> Average Distance to Nearest Port or Airport	<b>8.7 km</b> Total Length of Road per 100 km <sup>2</sup> (area)			

<sup>4</sup> 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<sup>5</sup> Rank: 13 of 22 Departments (Score: 0.501)

Izabal's score and ranking are due to moderate Vulnerability and Coping Capacity scores.

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



**Vulnerable Health Status**



**Economic Constraints**



**Infrastructure Capacity**

## Multi-Hazard Risk (MHR)

Multi-Hazard Risk<sup>6</sup> Rank: 15 of 22 Departments (Score: 0.470)

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

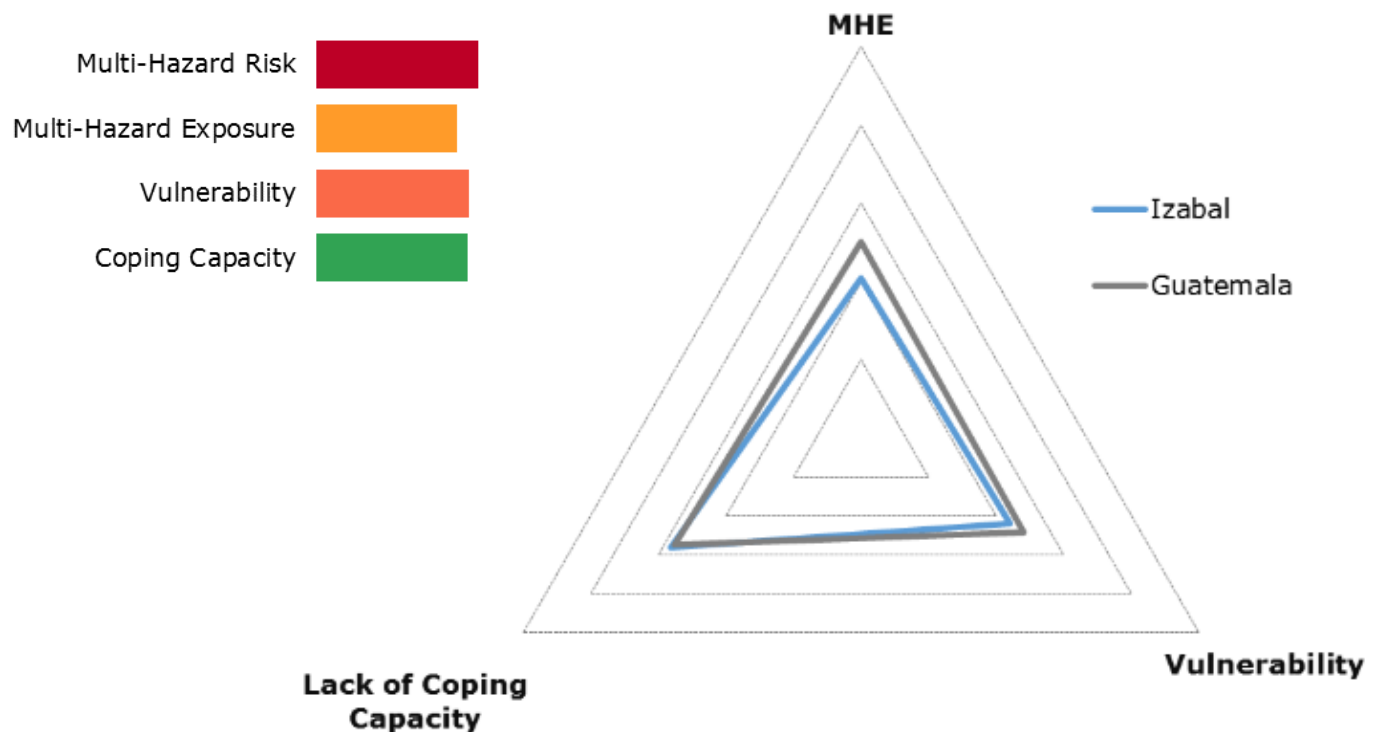


Figure 1. Department Multi-Hazard Risk component scores compared to overall average country scores

<sup>5</sup> **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.

<sup>6</sup> **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



### Lowest gender inequality

Ranked 22 of 22 departments, low gender inequality indicates that vulnerable populations are more likely to have their needs met under 'normal' conditions and may be less susceptible during times of disaster.



### Low environmental stress

Ranked 17 of 22 departments, 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

### Invest in public health education

Despite adequate health care infrastructure, health vulnerability is a major factor in Izabal's Vulnerability. By providing education programs to the public, especially young/expectant mothers and special needs populations, vulnerability can be decreased.

02

### Invest in communication infrastructure

Increase access to communications 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.



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