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Honduras Department Profiles

**National Disaster Preparedness Baseline Assessment
Subnational Assessment Results**

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



Atlántida

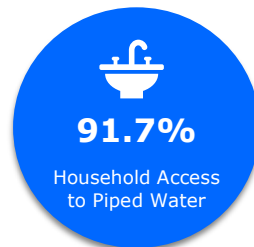
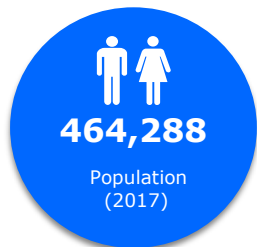
**Honduras National Disaster Preparedness Baseline Assessment
Department Profile**

Department: Atlántida

Department Capital: La Ceiba

Area: 4,372 km²

Atlántida is located on the northern Caribbean coast of Honduras. Atlántida's economy is primarily agriculture, livestock, commerce, and tourism. Historically, agricultural production in Atlántida is linked to the Standard Fruit Company (now Dole), which has a significant role in the exportation of produce, primarily bananas.



Municipality

Municipality	Population
Arizona	24,578
El Porvenir	24,228
Esparta	19,364
Jutiapa	36,207
La Ceiba	211,327
La Másica	31,034
San Francisco	15,531
Tela	102,018



**Multi-Hazard Risk Rank:
Low (12 of 18)**

**Lack of Resilience Rank:
Very Low (15 of 18)**

RVA Component Scores

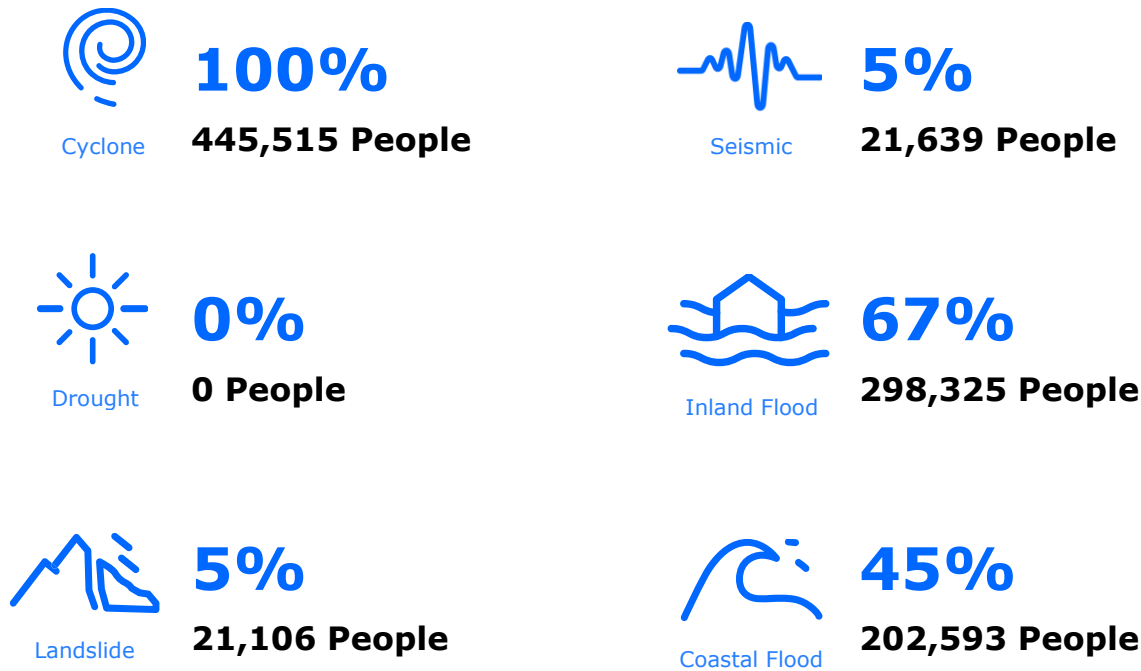
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Low		Very Low		High		Very Low		High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.446	12	0.400	15	0.539	6	0.363	15	0.563	6

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 6 of 18 Departments (Score: 0.539)

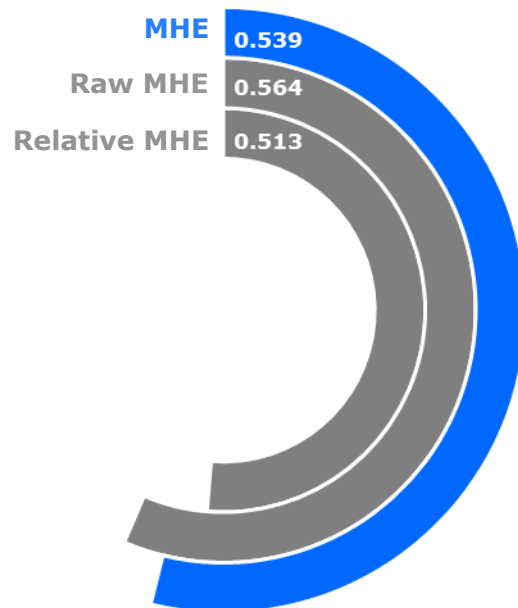
Table 2. Estimated ambient population² exposed to each hazard (2014).



Atlántida has the highest percentage of residents exposed to inland flooding in the country

Case Study Significant Flooding in Atlántida

Atlántida has experienced significant flooding four times in the last five years, and most recently in early 2017 when The Permanent Commission of Contingencies (COPECO) reported that at least 7,500 people were affected by heavy rains. Many people became isolated in the communities of Urraco, Esparta, Jutiapa, and La Ceiba. At least 44 houses were affected. Accumulated rainfall reached average values of 150-200 mm near the coast and 300 mm in the mountains near the coast.



⁴ Multi-Hazard Exposure: Average exposure of the population to hazards.

⁵ Ambient Population: 24-hour average estimate of the population in each department. Ambient population typically differs from census population.

Vulnerability (V)

Vulnerability³ Rank: 15 of 18 Departments (Score: 0.363) Vulnerability in Atlántida is influenced by moderate scores in Vulnerable Health Status and Environmental Stress. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

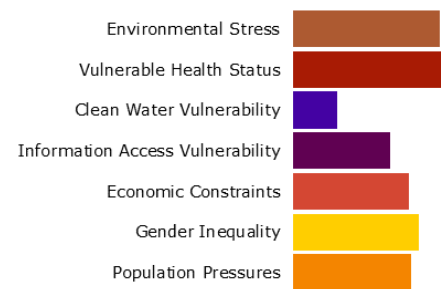









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	36.1% Forest Loss Due to Pine Beetle Plague	0% Water Shortage Area					
	Vulnerable Health Status	21 Infant Mortality Rate	187.4 Maternal Mortality Ratio	74.8 Life Expectancy (years)	0.3% Acute Malnutrition Rate	2.1% Population Disabled	0.561 Communicable Disease Sub-Index ⁴	0.516 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	91.7% Households Access to Piped Water	83.2% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	10.5% Adult Illiteracy	6.5 Average Years of Schooling	94.1% Enrollment in Basic Education	87.5% Households without Internet	24.8% Households without TV	32.1% Households without Radio	
	Economic Constraints	0.69 Economic Dependency Ratio	47.9% Population in Poverty	0.29 GINI Coefficient				
	Gender Inequality	0.82 Ratio of Female to Male Land Ownership Rate	0.86 Ratio of Female to Male Home Ownership Rate	0.32 Ratio of Female to Male Economic Activity	1.06 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.2% Average Annual Population Change	4.6% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 6 of 18 Departments (Score: 0.563) Atlántida exhibits weaker Coping Capacity in the areas of Economic Capacity and Governance. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

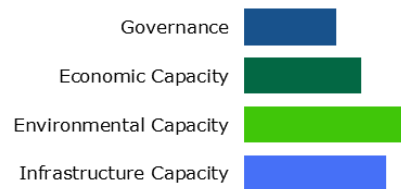


Table 4. Component scores for each coping capacity subcomponent.

	Governance	88.3 Homicides per 100k Persons	308.6 Sexual Violence and Assault per 100k Persons	30.1% Households with Public Garbage Collection	55.9% Voter Participation (2013 Election)	
	Economic Capacity	33.2% Economic Activity Rate	97.1% Employment Rate	26.6% Population in Highest Wealth Quintile		
	Environmental Capacity	43.0% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	5.1 Hospital Beds per 10,000 Persons	3.2 Physicians per 10,000 Persons	9.5 Nurses per 10,000 Persons	23.7 km Average Distance to Nearest Hospital	88.9% Children Completed Immunization Schedule
	Communications Capacity	18.7% Households with Access to Fixed Phone Line	70.5% Households with Access to Mobile Phone			
	Transportation Capacity	22.5 km Average Distance to Nearest Port or Airport	15.5 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 15 of 18 Departments (Score: 0.400)

Atlántida's Lack of Resilience score and ranking are due to very low Vulnerability combined with high Coping Capacity scores.

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



Governance



Economic Capacity



Vulnerable Health Status

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 12 of 18 Departments (Score: 0.446)

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

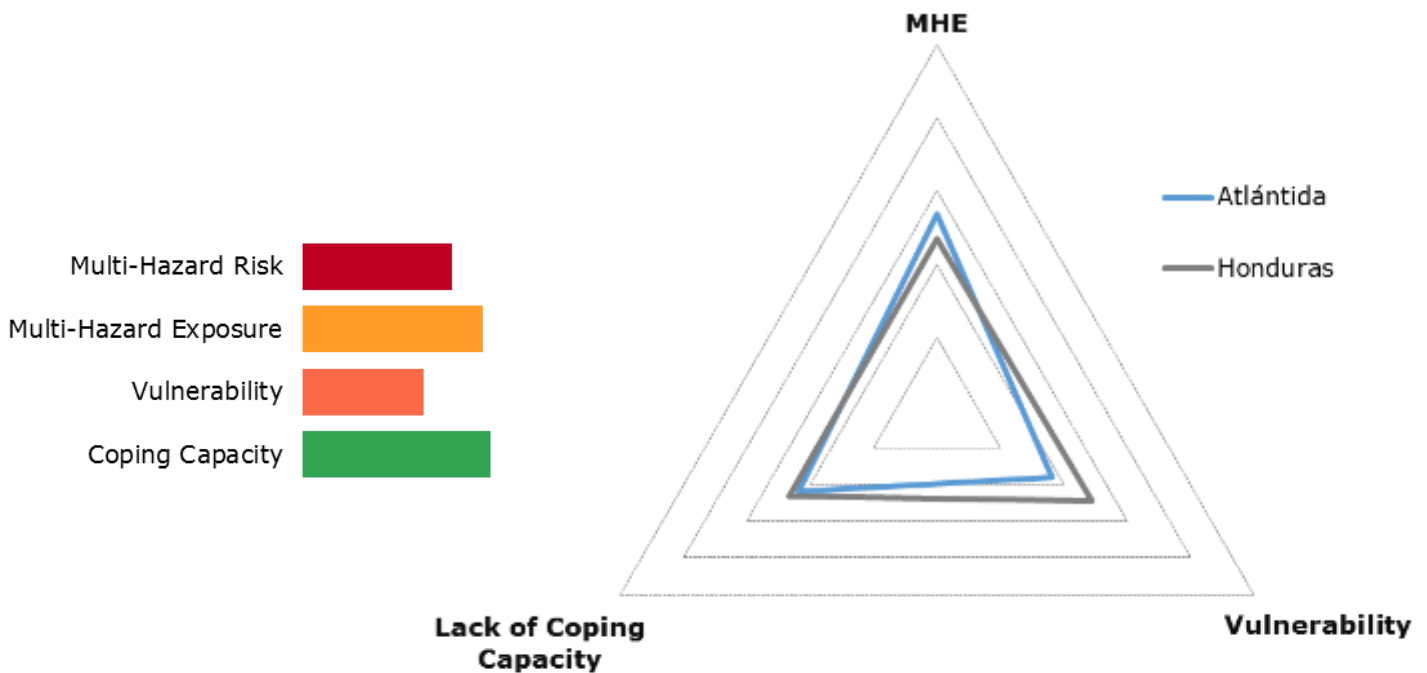


Figure 45. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 clean water vulnerability

Ranked 16 of 18 departments, low clean water vulnerability indicates that the population has access to high water quality and good containment systems, reducing susceptibility to disaster.



Low overall vulnerability

Ranked 15 of 18 departments, low overall vulnerability indicates that Atlántida department is less susceptible to the negative impacts of a disaster and will likely recover faster after an event.

Recommendations

01

Increase governance

High crime rates in the capital city result in low governance scores. Youth-education programs, increased law enforcement, and personal safety-education messages can decrease crime and increase coping capacity.

02

Increase business development

Invest in business development and education programs to boost economic capacity and increase the number of businesses and the likelihood of success of those businesses.



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Choluteca

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

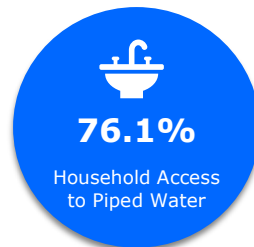
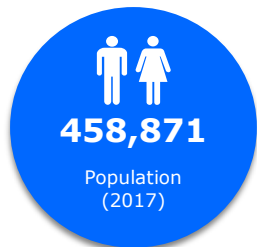
Department: Choluteca



Department Capital: Choluteca

Area: 4,360 km²

Choluteca is the southernmost department of Honduras, with its coast on the Gulf of Fonseca, sharing a border with the Republic of Nicaragua to the east and south. Economic activity is based in agriculture, livestock, fishing, and trade. The department has the second highest Clean Water Vulnerability in Honduras.



Municipality

Municipality	Population
Apacilagua	9,093
Choluteca	162,125
Concepción de María	27,687
Duyure	3,537
El Corpus	25,591
El Triunfo	46,490
Marcovia	47,113
Morolica	5,012
Namasigue	32,096
Orocuina	18,676
Pespire	24,063
San Antonio de Flores	5,470
San Isidro	3,793
San José	4,633
San Marcos de Colón	28,679
Santa Ana de Yusguare	14,813



**Multi-Hazard Risk Rank:
Very Low (15 of 18)**

**Lack of Resilience Rank:
Low (12 of 18)**

RVA Component Scores

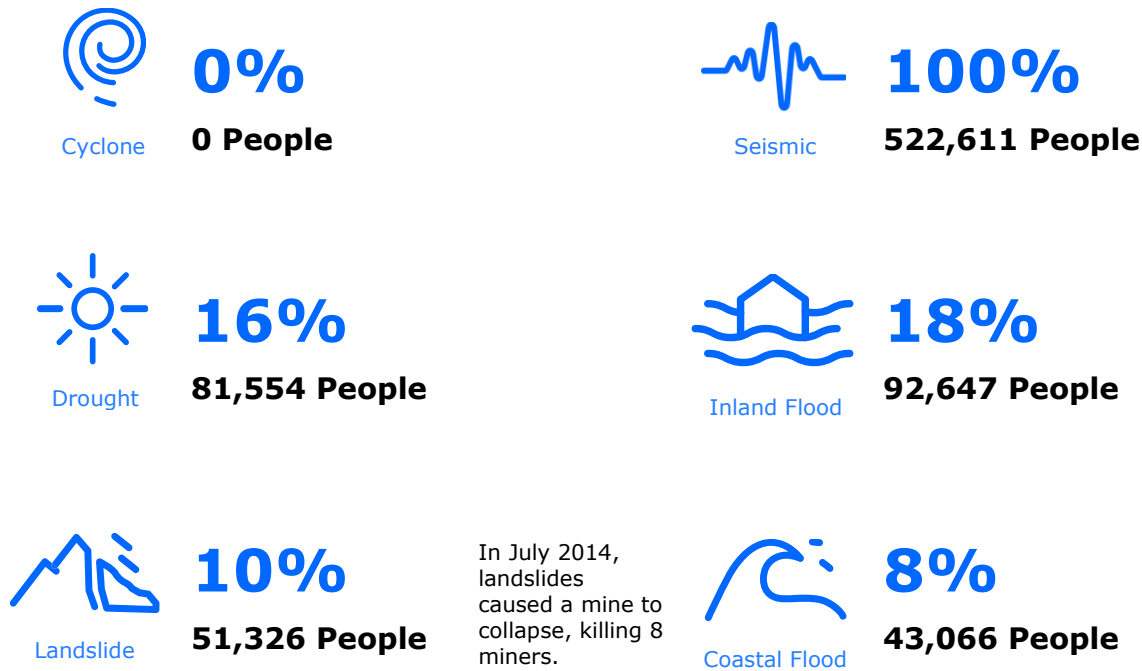
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very Low		Very Low		Very Low		Low		Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.422	15	0.476	12	0.315	15	0.459	13	0.508	12

Multi-Hazard Exposure (MHE)

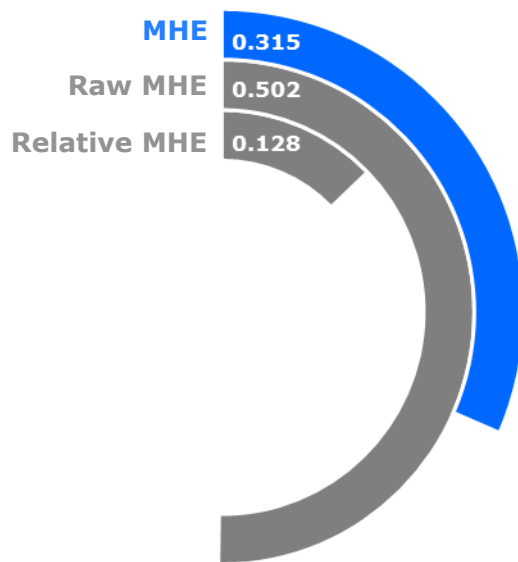
Multi-Hazard Exposure¹ Rank: 15 of 18 Departments (Score: 0.315)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Pan American Highway

The department's capital city, Choluteca, is well-connected to the rest of Central America via the Pan American Highway, which passes directly through the city. The Pan American Highway is a 30,000-km road along the Pacific coast, stretching from Peru to Canada. Access to the highway increased the department's ability to receive goods and services during response and recovery activities.



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: 13 of 18 Departments (Score: 0.459) Vulnerability in Choluteca is strongly influenced by Clean Water Vulnerability, Economic Constraints, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

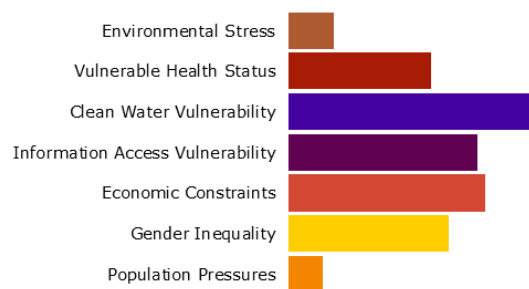









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	0.6% Forest Loss Due to Pine Beetle Plague	17.4% Water Shortage Area					
	Vulnerable Health Status	18.7 Infant Mortality Rate	95.1 Maternal Mortality Ratio	75.3 Life Expectancy (years)	2.3% Acute Malnutrition Rate	2.6% Population Disabled	0.500 Communicable Disease Sub-Index ⁴	0.313 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	76.1% Households Access to Piped Water	41.5% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	17.7% Adult Illiteracy	6.1 Average Years of Schooling	93.2% Enrollment in Basic Education	95.2% Households without Internet	44.6% Households without TV	39.9% Households without Radio	
	Economic Constraints	0.69 Economic Dependency Ratio	61.9% Population in Poverty	0.41 GINI Coefficient				
	Gender Inequality	0.44 Ratio of Female to Male Land Ownership Rate	0.92 Ratio of Female to Male Home Ownership Rate	0.23 Ratio of Female to Male Economic Activity	1.03 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	1.0% Average Annual Population Change	4.6% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 12 of 18 Departments (Score: 0.508) Choluteca exhibits weaker Coping Capacity in the areas of Economic Capacity, Environmental Capacity, and Communications Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

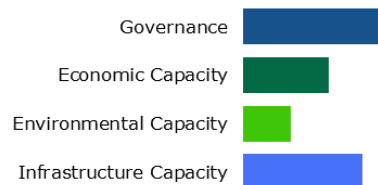









Table 4: Component scores for each coping capacity subcomponent.

	Governance	22.3 Homicides per 100k Persons	165.0 Sexual Violence and Assault per 100k Persons	17.1% Households with Public Garbage Collection	73.6% Voter Participation (2013 Election)	
	Economic Capacity	32.5% Economic Activity Rate	97.6% Employment Rate	9.7% Population in Highest Wealth Quintile		
	Environmental Capacity	11.4% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.2 Hospital Beds per 10,000 Persons	2.5 Physicians per 10,000 Persons	9.1 Nurses per 10,000 Persons	26.8 km Average Distance to Nearest Hospital	92.4% Children Completed Immunization Schedule
	Communications Capacity	12.3% Households with Access to Fixed Phone Line	54.2% Households with Access to Mobile Phone			
	Transportation Capacity	23.1 km Average Distance to Nearest Port or Airport	23.1 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 12 of 18 Departments (Score: 0.476)

Choluteca's Lack of Resilience score and ranking are due to low Vulnerability combined with low Coping Capacity scores.

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



**Clean Water
Vulnerability**



**Economic
Constraints**



**Economic
Capacity**

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 15 of 18 Departments (Score: 0.422)

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

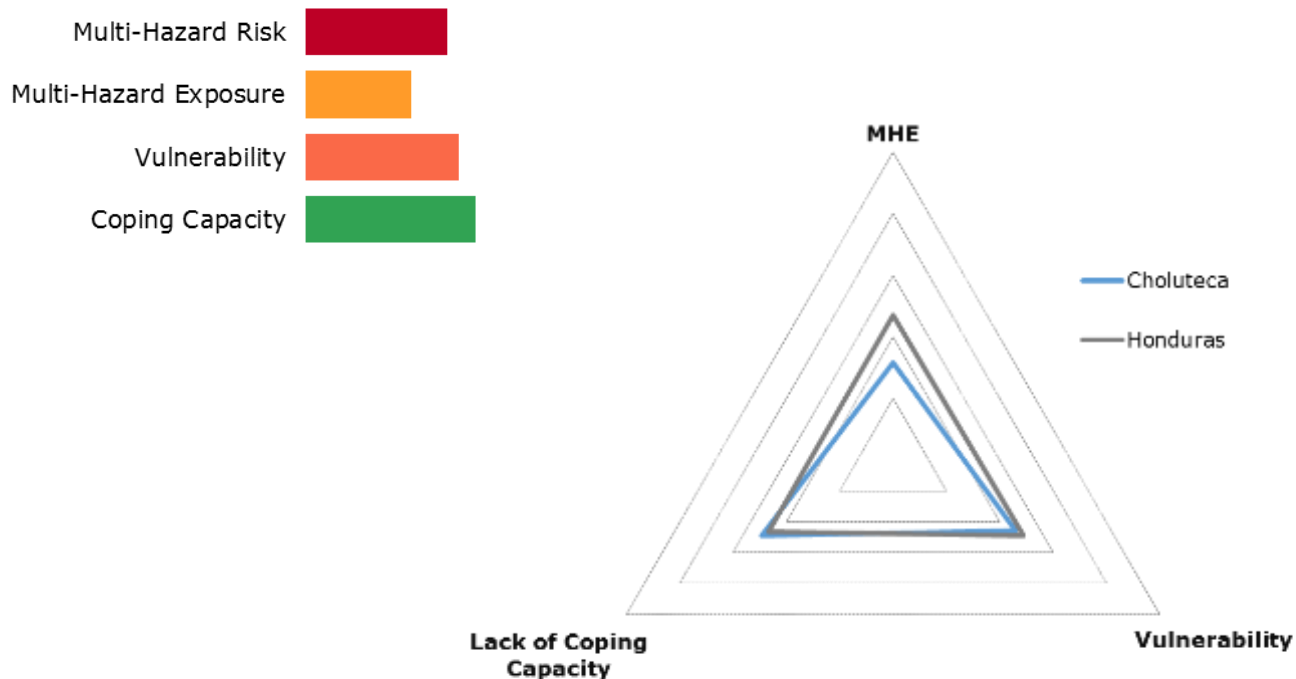


Figure 46. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 population pressures

Ranked 18 of 18 departments, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.



High overall governance

Ranked 4 of 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.

Recommendations

01

Invest in water infrastructure

Increased availability of clean water sources and proper sanitation services will decrease vulnerability and allow for quicker recovery in the event of disaster.

02

Provide business opportunities and education

Institute programs to provide independent economic opportunities in the department. Increased economic capacity will decrease vulnerability in emergencies.



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Colón

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

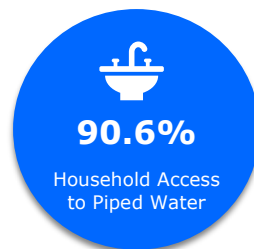
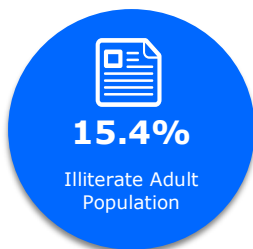
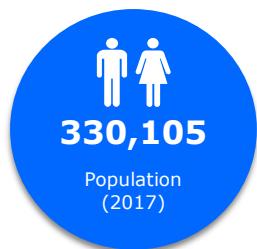
Department: Colón



Department Capital: Trujillo

Area: 8,249 km²

Colón is located on the northern Caribbean coast of Honduras, west of Gracias a Dios. The department is home to a substantial Garifuna population. Colón's economy is based primarily in cattle ranching and agriculture.



Municipality

Municipality	Population
Balfate	13,326
Bonito Oriental	29,313
Iriona	21,716
Limón	15,112
Sabá	31,402
Santa Fe	5,376
Santa Rosa de Aguán	5,498
Sonaguera	45,073
Tocoa	98,602
Trujillo	64,688



**Multi-Hazard Risk Rank:
Very Low (16 of 18)**

**Lack of Resilience Rank:
Low (13 of 18)**

RVA Component Scores

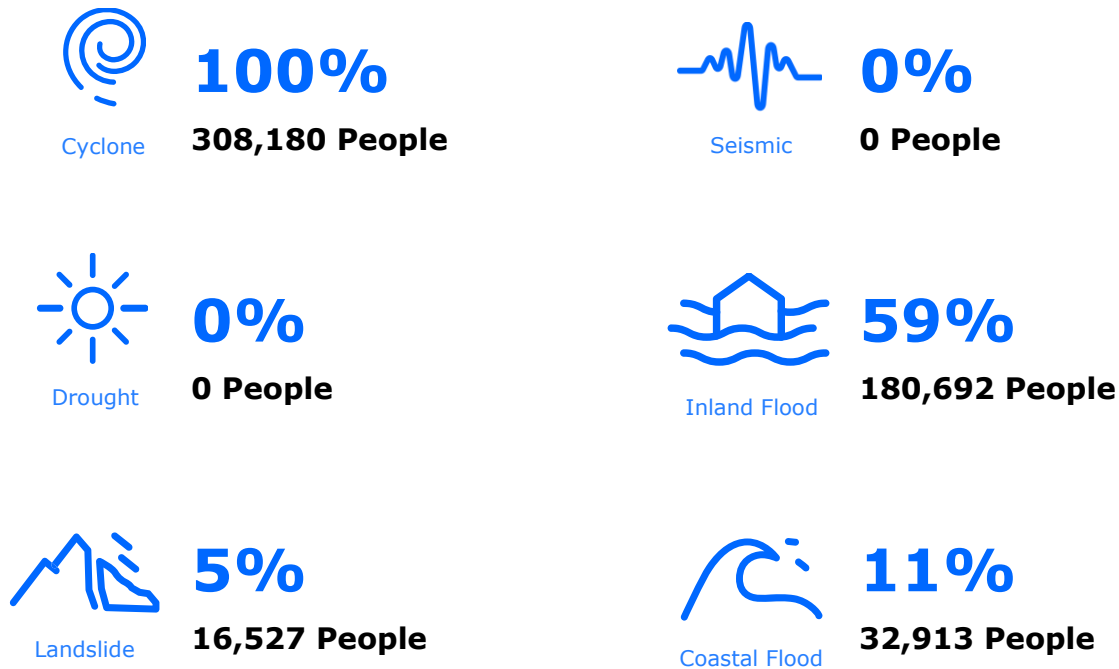
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very Low		Low		Low		Low		Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.422	16	0.470	13	0.325	13	0.409	14	0.468	14

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 13 of 18 Departments (Score 0.325)

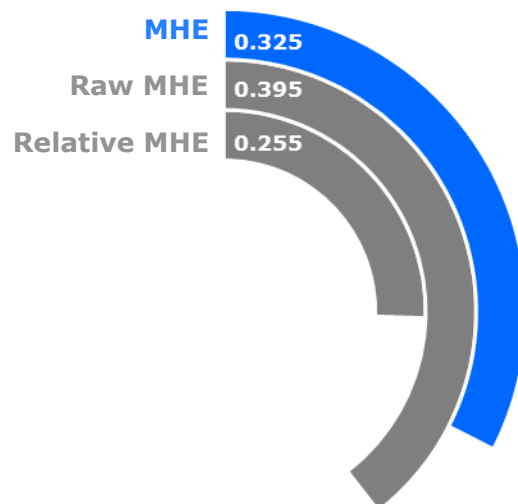
Table 2. Estimated ambient population² exposed to each hazard (2014)



Heavy rainfall in January 2014 caused thousands of people in the town of Santa Fe to be stranded.

Case Study: Santa Fe Evacuation Plan

The municipality of Santa Fe has a well-rehearsed disaster-evacuation plan. Coordinators are assigned to warn homes in case evacuation is required. They have posted signs with escape routes and warnings to not cross the river based on water levels. They have built an evacuation center up the mountain from the town to escape flood waters.



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: 14 of 18 Departments (Score: 0.409) Vulnerability in Colón is influenced by Information Access Vulnerability, Vulnerable Health Status, Population Pressures, and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

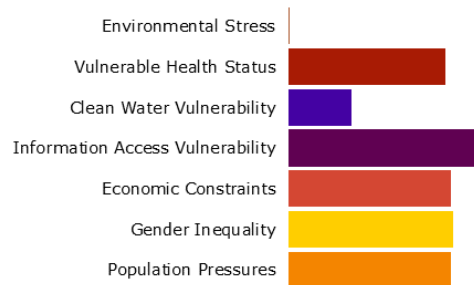









Table 3: Component scores for each vulnerability subcomponent.

	Environmental Stress	0.1% Forest Loss Due to Pine Beetle Plague	0% Water Shortage Area					
	Vulnerable Health Status	16.5 Infant Mortality Rate	249 Maternal Mortality Ratio	75.4 Life Expectancy (years)	1.3% Acute Malnutrition Rate	2.6% Population Disabled	0.404 Communicable Disease Sub-Index ⁴	0.454 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	90.6% Households Access to Piped Water	77.8% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	15.4% Adult Illiteracy	6.0 Average Years of Schooling	90.7% Enrollment in Basic Education	95.2% Households without Internet	35.9% Households without TV	42.2% Households without Radio	
	Economic Constraints	0.77 Economic Dependency Ratio	54.4% Population in Poverty	0.29 GINI Coefficient				
	Gender Inequality	0.58 Ratio of Female to Male Land Ownership Rate	0.91 Ratio of Female to Male Home Ownership Rate	0.25 Ratio of Female to Male Economic Activity	1.07 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.1% Average Annual Population Change	7.8% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 14 of 18 Departments (Score: 0.468) Colón exhibits weaker Coping Capacity in the areas of Economic Capacity, Governance, and Infrastructure (especially Transportation and Health Care). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

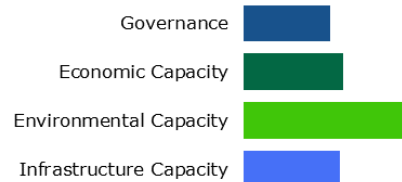









Table 4: Component scores for each coping capacity subcomponent.

	Governance	65.0 Homicides per 100k Persons	129.1 Sexual Violence and Assault per 100k Persons	7.8% Households with Public Garbage Collection	60.5% Voter Participation (2013 Election)	
	Economic Capacity	32.7% Economic Activity Rate	97.8% Employment Rate	14.5% Population in Highest Wealth Quintile		
	Environmental Capacity	42.3% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.3 Hospital Beds per 10,000 Persons	2.0 Physicians per 10,000 Persons	9.0 Nurses per 10,000 Persons	50.1 km Average Distance to Nearest Hospital	86.1% Children Completed Immunization Schedule
	Communications Capacity	12.8% Households with Access to Fixed Phone Line	65.8% Households with Access to Mobile Phone			
	Transportation Capacity	36.6 km Average Distance to Nearest Port or Airport	7.7 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 13 of 18 Departments (Score: 0.470)

Colón's Lack of Resilience score and ranking are due to low Vulnerability combined with low Coping Capacity scores.

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



Governance



Economic Capacity



**Infrastructure
(Transportation
and Health Care)**

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 16 of 18 Departments (Score: 0.422)

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

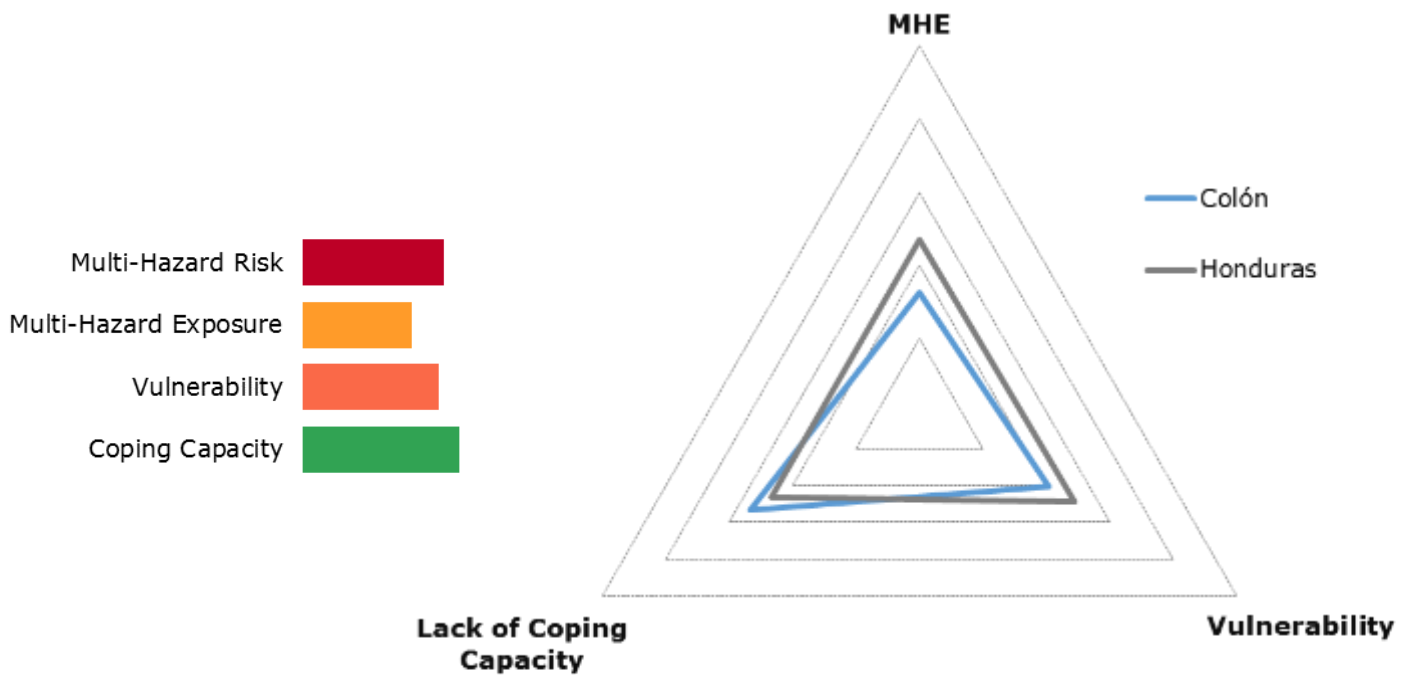


Figure 47. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 overall vulnerability

Ranked 14 of 18 departments, low overall vulnerability indicates that Colón department is less susceptible to the negative impacts of a disaster and will likely recover faster after an event.



Low clean water vulnerability

Ranked 15 of 18 departments, low clean water vulnerability indicates that a population has access to high water quality and good containment systems, reducing susceptibility to disaster.



Low environmental stress

Ranked 16 of 18 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

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.

02

Invest in transportation infrastructure

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



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Comayagua

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

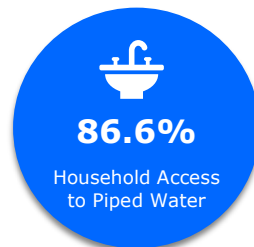
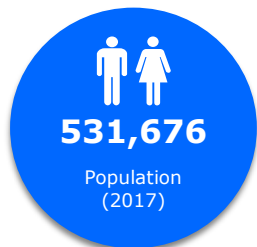
Department: Comayagua



Department Capital: Comayagua

Area: 5,124 km²

Comayagua is located in central Honduras. The economy is based primarily in livestock and agriculture. Between the 2001 and 2013 censuses, Comayagua exhibited the second largest population growth rate (40%) in the country. Soto Cano Air Base is located within the department.



Municipality

Municipality	Population
Ajuterique	11,655
Comayagua	159,904
El Rosario	31,339
Esquías	21,514
La Libertad	28,275
La Trinidad	4,755
Lamaní	7,239
Las Lajas	15,284
Lejamaní	5,883
Meámbar	13,287
Minas de Oro	13,548
Ojos de Agua	10,873
San Jerónimo	22,441
San José de Comayagua	7,909
San José del Potrero	7,125
San Luis	11,718
San Sebastián	3,629
Siguatepeque	103,506
Taulabé	25,158
Villa de San Antonio	25,234



**Multi-Hazard Risk Rank:
Very High (3 of 18)**

**Lack of Resilience Rank:
Moderate (8 of 18)**

RVA Component Scores

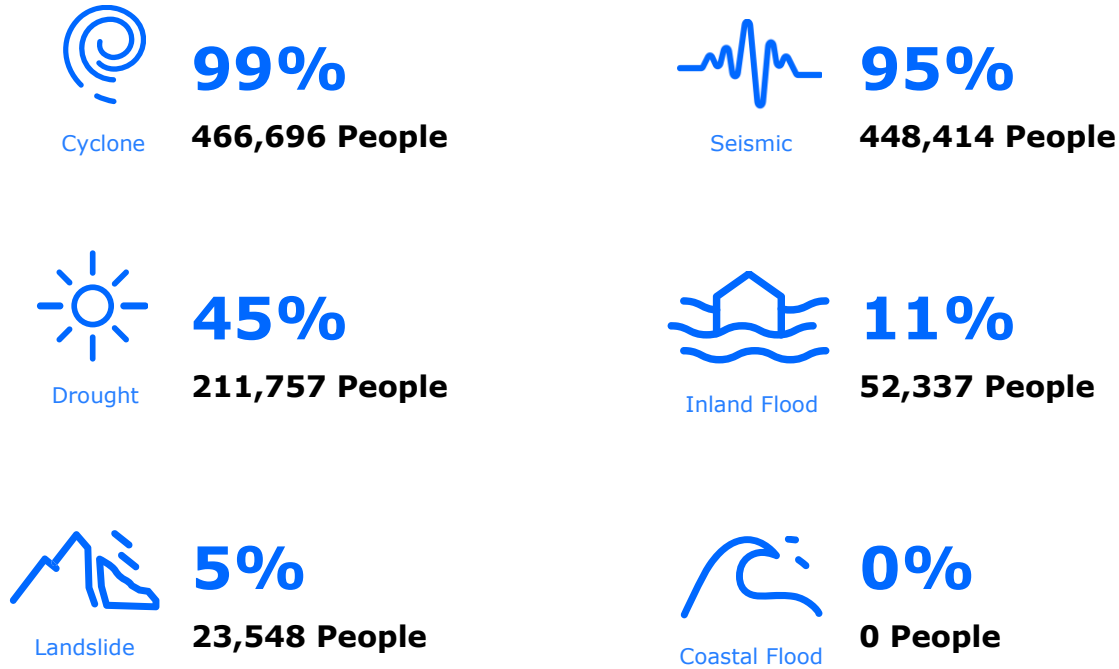
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		Moderate		High		Moderate		Moderate	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.554	3	0.503	8	0.658	4	0.564	7	0.559	7

Multi-Hazard Exposure (MHE)

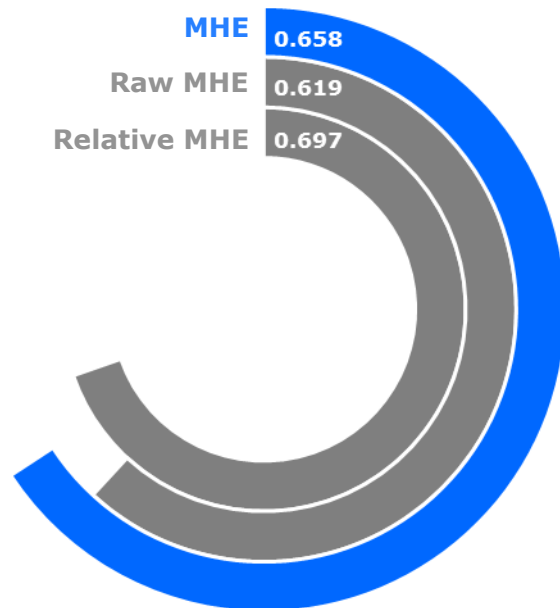
Multi-Hazard Exposure¹ Rank: 4 of 18 Departments (Score: 0.658)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Comayagua Farm Penitentiary

In February 2012, a fire broke out in the Comayagua Farm Penitentiary killing 366 inmates and injuring hundreds of others. IFRC Disaster Relief Emergency Funds were released to the Honduran Red Cross to assist in providing pre-hospital care to the injured and psychosocial support to the relatives of deceased inmates. This was the third penitentiary fire in the last 10 years in Honduras. Overall, Honduras has 24 prisons with the capacity of 8,280 persons, however, in 2011 the system had approximately 15,000 inmates, 80 percent over its limit.



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: 7 of 18 Departments (Score: 0.564) Vulnerability in Comayagua is strongly influenced by Population Pressures and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

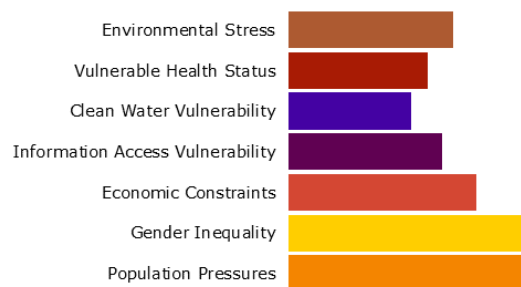


Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	26.3% Forest Loss Due to Pine Beetle Plague	23.5% Water Shortage Area					
	Vulnerable Health Status	18.3 Infant Mortality Rate	201.2 Maternal Mortality Ratio	76.5 Life Expectancy (years)	1.5% Acute Malnutrition Rate	2.4% Population Disabled	0.405 Communicable Disease Sub-Index ⁴	0.448 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	86.6% Households Access to Piped Water	63.2% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	14.8% Adult Illiteracy	6.0 Average Years of Schooling	90.2% Enrollment in Basic Education	91.8% Households without Internet	35.1% Households without TV	30.8% Households without Radio	
	Economic Constraints	0.75 Economic Dependency Ratio	56.2% Population in Poverty	0.36 GINI Coefficient				
	Gender Inequality	0.31 Ratio of Female to Male Land Ownership Rate	0.86 Ratio of Female to Male Home Ownership Rate	0.25 Ratio of Female to Male Economic Activity	1.11 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	3.3% Average Annual Population Change	7.4% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 7 of 18 Departments (Score: 0.559)

Comayagua exhibits weaker Coping Capacity in the areas of Environmental Capacity and Health Care Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

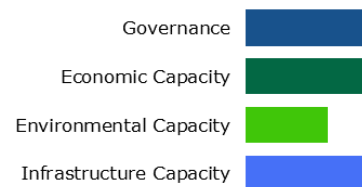









Table 4. Component scores for each coping capacity subcomponent

	Governance	51.0 Homicides per 100k Persons	155.9 Sexual Violence and Assault per 100k Persons	25.1% Households with Public Garbage Collection	63.1% Voter Participation (2013 Election)	
	Economic Capacity	35.2% Economic Activity Rate	98.4% Employment Rate	15.1% Population in Highest Wealth Quintile		
	Environmental Capacity	18.2% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	3.2 Hospital Beds per 10,000 Persons	2.1 Physicians per 10,000 Persons	7.8 Nurses per 10,000 Persons	29.5 km Average Distance to Nearest Hospital	86.4% Children Completed Immunization Schedule
	Communications Capacity	19.2% Households with Access to Fixed Phone Line	64.1% Households with Access to Mobile Phone			
	Transportation Capacity	27.4 km Average Distance to Nearest Port or Airport	15.9 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 8 of 18 Departments (Score: 0.503)

Comayagua's Lack of Resilience score and ranking are due to moderate Vulnerability combined with moderate Coping Capacity scores.

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



Gender Inequality



Population Pressures



Environmental Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 3 of 18 Departments (Score: 0.554)

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

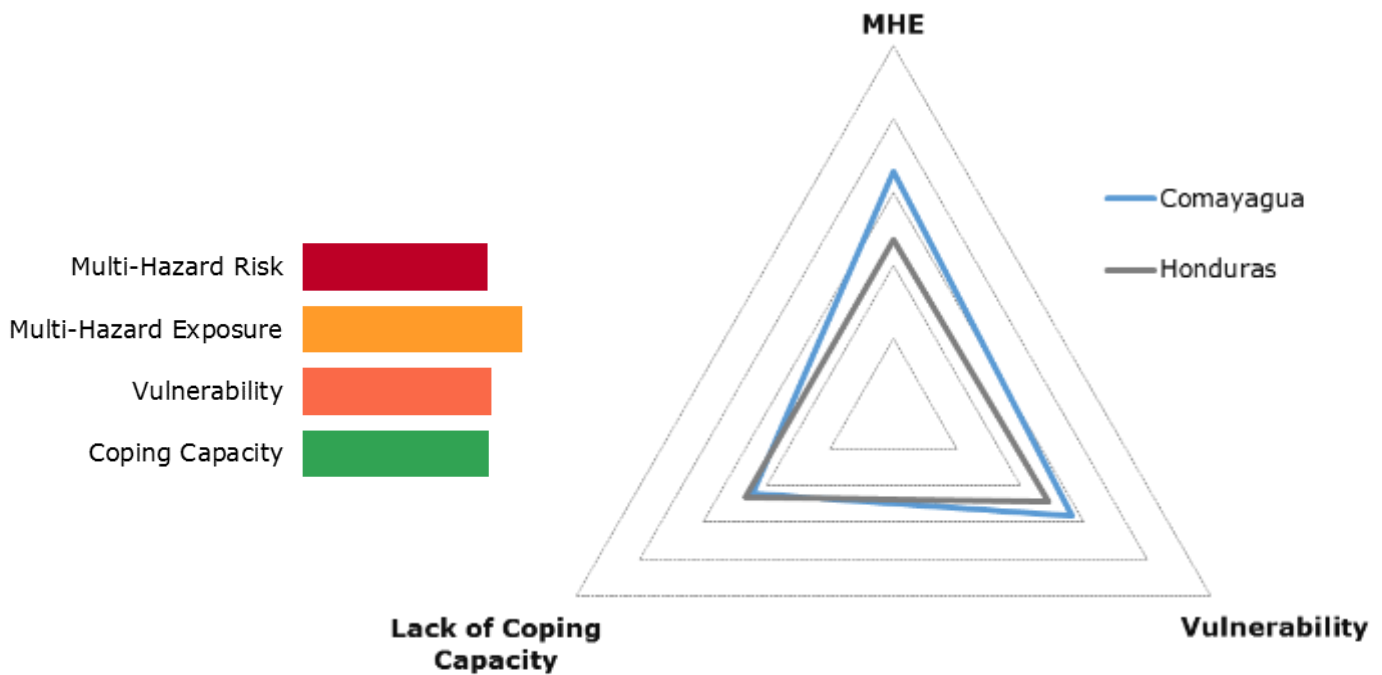


Figure 48. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 information access

High information access indicates that the population has an increased ability to access and comprehend disaster-related information before, during, and after events.



Low vulnerable health status

Ranked 13 of 18 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.

Recommendations

01

Provide opportunities for women

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

02

Monitor and manage population influx

Invest in a program to manage population influx into the region. Comayagua'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

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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Copán

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

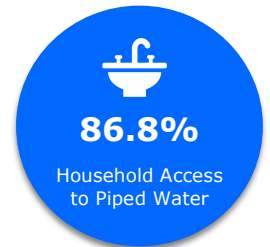
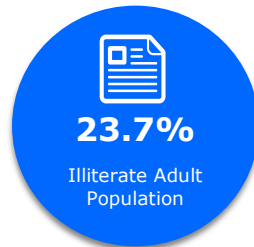
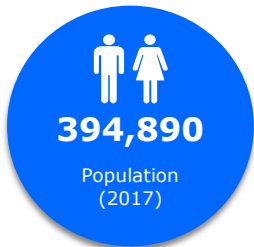
Department: Copán



Department Capital: Santa Rosa de Copán

Area: 3,242 km²

Copán is located in western Honduras, sharing a border with the Republic of Guatemala. The department is known for its tobacco production and the pre-Columbian ruins of Copán. Copán has the lowest life expectancy in the country.



Municipality	Population
Cabañas	15,082
Concepción	8,524
Copán Ruinas	40,952
Corquín	17,940
Cucuyagua	17,379
El Paraíso	20,104
Florida	29,400
La Jigua	9,677
La Unión	16,612
Nueva Arcadia	43,346
San Agustín	5,801
San Antonio	10,185
San José	7,218
San Juan de Opoa	9,788
San Nicolás	8,068
San Pedro	7,772
Santa Rita	31,455
Santa Rosa de Copán	66,629
Trinidad de Copán	7,215



Multi-Hazard Risk Rank: Moderate (9 of 18)

Lack of Resilience Rank: Moderate (9 of 18)

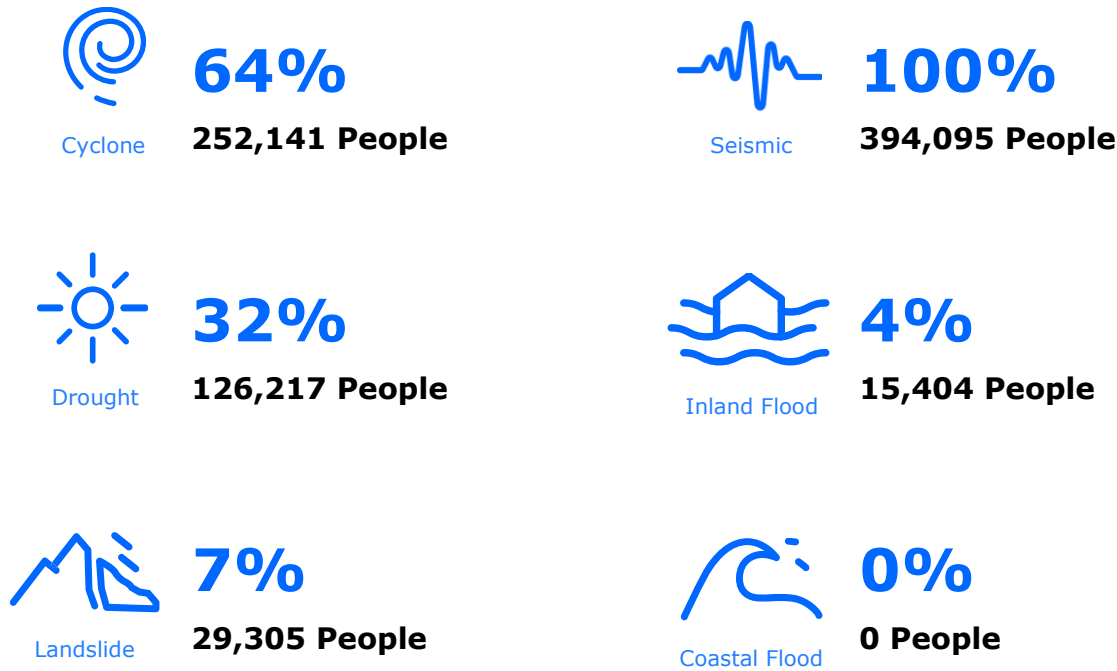
RVA Component Scores

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Moderate		Moderate		Moderate		High		High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.489	9	0.497	9	0.472	9	0.573	5	0.579	5

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 9 of 18 Departments (Score: 0.472)

Table 1. Estimated ambient population² exposed to each hazard (2014).

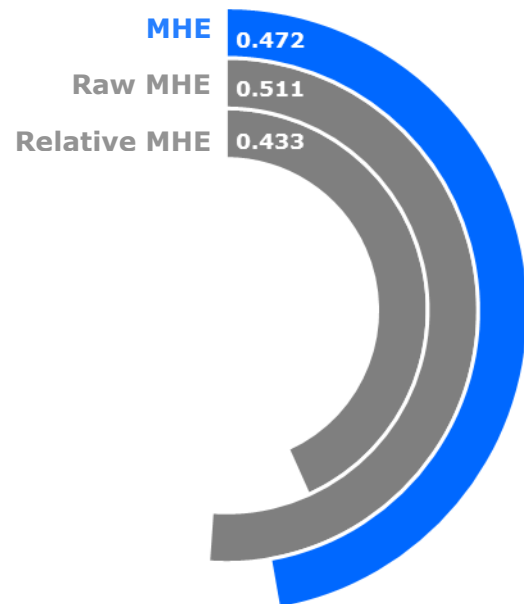


Case Study: SOUTHCOM Community Center

In 2016, U.S. Southern Command financed and constructed a community center to benefit the Chorti Commonwealth within the Department of Copán. The center will support the preparation for disaster relief in vulnerable communities in the west of Honduras.

The facility will function as a storage facility, alternate emergency-operations center, staging for medical brigades, and hosting cultural and community events.

The center consists of a conference room and a warehouse with a storage capacity of 10 metric tons of supplies. It also has sanitation facilities, an electrical power generator, a water tank, and an office. The property can shelter approximately 300 people.



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: 5 of 18 Departments (Score: 0.573) Vulnerability in Copán is strongly influenced by Information Access Vulnerability, Gender Inequality, Economic Constraints, and Vulnerable Health Status. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

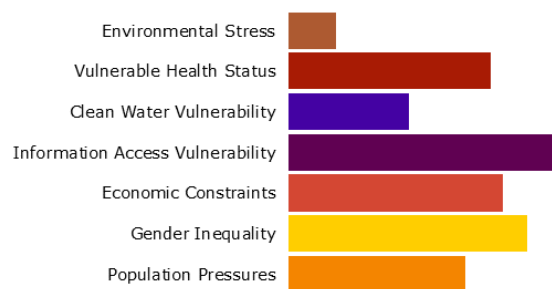









Table 2. Component scores for each vulnerability subcomponent

	Environmental Stress	0.2% Forest Loss Due to Pine Beetle Plague	18.8% Water Shortage Area					
	Vulnerable Health Status	24 Infant Mortality Rate	209.2 Maternal Mortality Ratio	73.6 Life Expectancy (years)	1.2 Acute Malnutrition Rate	3.2% Population Disabled	0.319 Communicable Disease Sub-Index ⁴	0.408 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	86.8% Households Access to Piped Water	63.4% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	23.7% Adult Illiteracy	5.4 Average Years of Schooling	85.2% Enrollment in Basic Education	96.2% Households without Internet	44.4% Households without TV	45.5% Households without Radio	
	Economic Constraints	0.75 Economic Dependency Ratio	58.6% Population in Poverty	0.41 GINI Coefficient				
	Gender Inequality	0.38 Ratio of Female to Male Land Ownership Rate	0.84 Ratio of Female to Male Home Ownership Rate	0.23 Ratio of Female to Male Economic Activity	1.10 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.4% Average Annual Population Change	7.6% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 5 of 18 Departments (Score: 0.579) Copán exhibits weaker Coping Capacity in the areas of Environmental Capacity and Communications Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

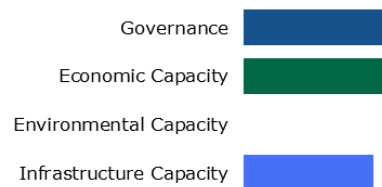









Table 3. Component scores for each coping capacity subcomponent

	Governance	58.8 Homicides per 100k Persons	154.4 Sexual Violence and Assault per 100k Persons	24.4% Households with Public Garbage Collection	72.2% Voter Participation (2013 Election)	
	Economic Capacity	37.2% Economic Activity Rate	98.6% Employment Rate	15.5% Population in Highest Wealth Quintile		
	Environmental Capacity	4.6% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	18.2 Hospital Beds per 10,000 Persons	3.4 Physicians per 10,000 Persons	10.3 Nurses per 10,000 Persons	29.2 km Average Distance to Nearest Hospital	87.1% Children Completed Immunization Schedule
	Communications Capacity	11.2% Households with Access to Fixed Phone Line	56.9% Households with Access to Mobile Phone			
	Transportation Capacity	20.1 km Average Distance to Nearest Port or Airport	22.3 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 9 of 18 Departments (Score: 0.497)

Copán's Lack of Resilience score and ranking are due to high Vulnerability combined with high Coping Capacity scores.

Table 4. The three thematic areas with the weakest relative scores.



**Information
Access
Vulnerability**



**Vulnerable
Health Status**



**Environmental
Capacity**

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 9 of 18 Departments (Score: 0.489)

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

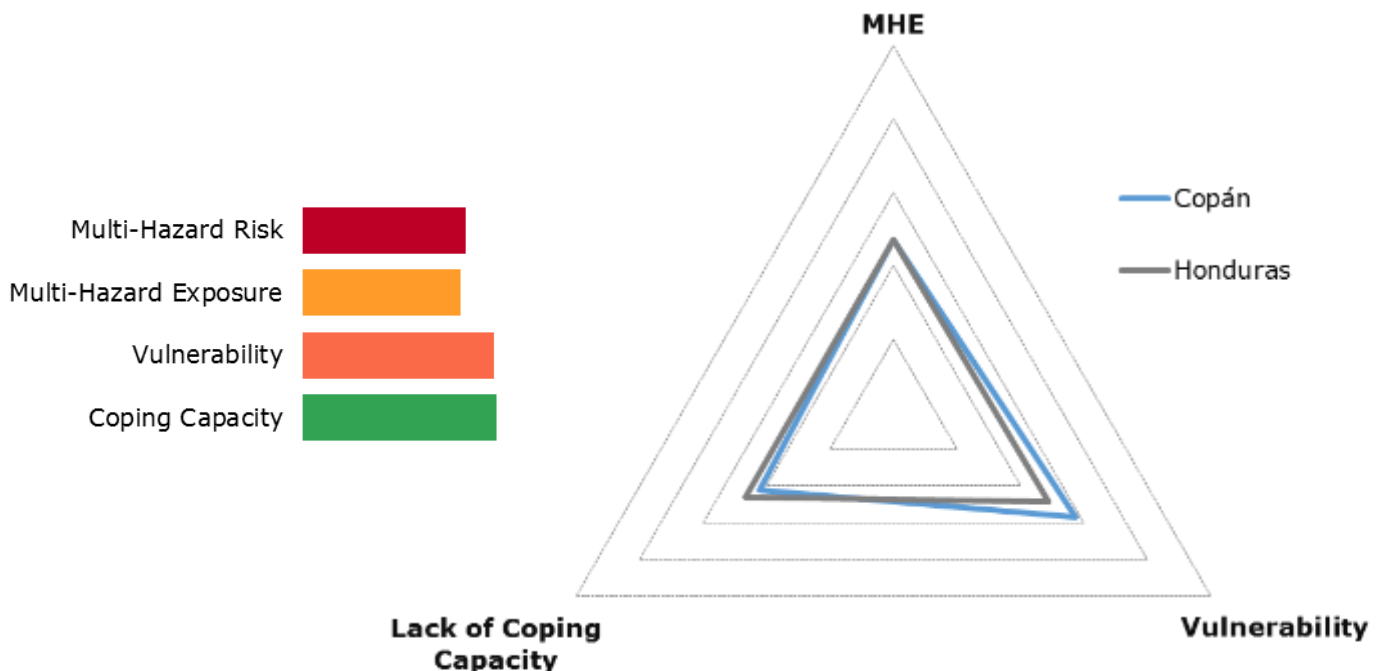


Figure 49. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 transportation capacity

Ranked 5 of 18 departments, well-developed transportation networks facilitate the movement of goods and services, decreasing wait times for response and relief supplies.



High economic capacity

Ranked 5 of 18 departments, high economic capacity indicates that Copán may be able to invest in additional mitigation and preparedness measures at the local and community level.

Recommendations

01

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.

02

Provide health education and access

Increased early health education and access for special-needs populations and new/expectant mothers can decrease health vulnerability. Additional health-care infrastructure (doctors and nurses) will increase access to critical services before, during, and after disaster events.



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Cortés

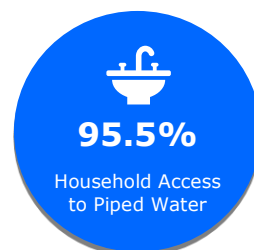
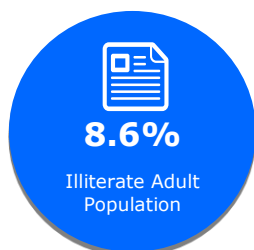
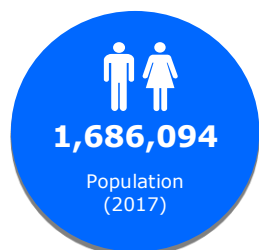
**Honduras National Disaster Preparedness Baseline Assessment
Department Profile**

Department: Cortés

Department Capital: San Pedro Sula

Area: 3,923 km²

Cortés is located west of Atlántida on the Caribbean coast of Honduras. It is the most populous department in Honduras, and is home to the city of San Pedro Sula, the nation's primary industrial center. The fertile Sula Valley provides ideal conditions for the cultivation of bananas, citrus, pineapple, sugar cane, coffee, and rice.



Municipality	Population
Choloma	255,625
Omoa	49,749
Pimienta	20,394
Potrerrillos	24,958
Puerto Cortés	129,961
San Antonio de Cortés	22,498
San Francisco de Yojoa	23,499
San Manuel	61,159
Santa Cruz de Yojoa	88,054
Villanueva	165,602
La Lima	78,596
San Pedro Sula	765,999



**Multi-Hazard Risk Rank:
High (4 of 18)**

**Lack of Resilience Rank:
Very Low (16 of 18)**

RVA Component Scores

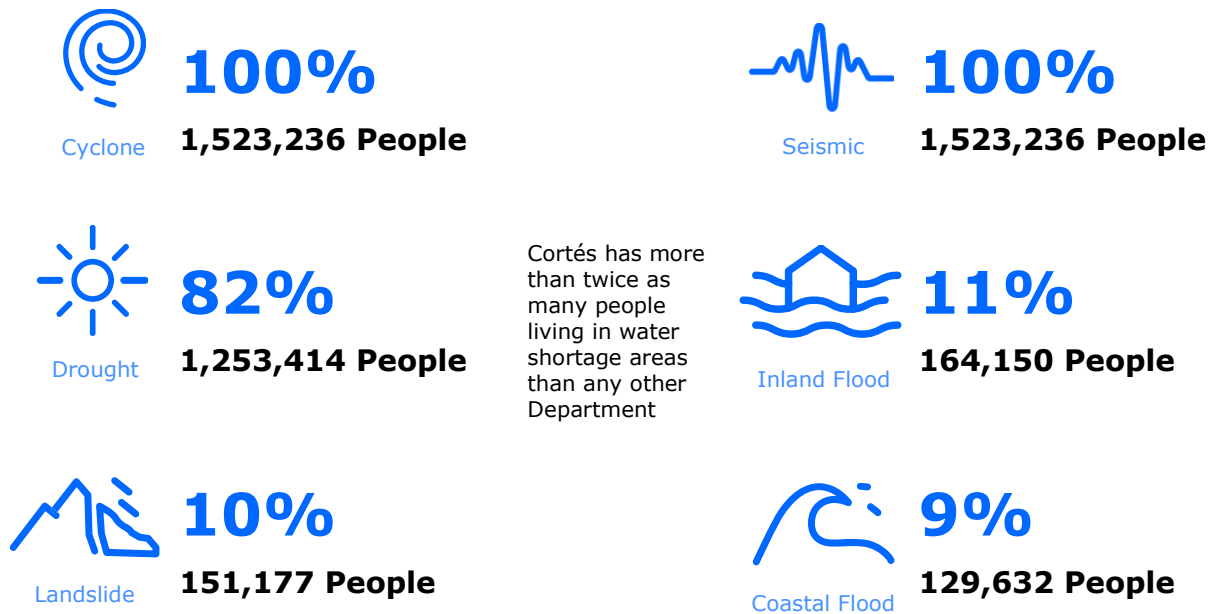
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
High		Very Low		Very High		Very Low		High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.545	4	0.318	16	1.000	1	0.265	18	0.629	4

Multi-Hazard Exposure (MHE)

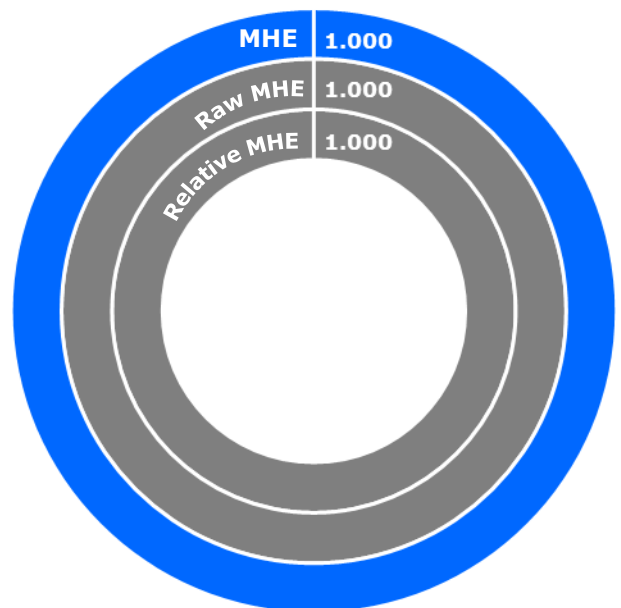
Multi-Hazard Exposure¹ Rank: 1 of 18 Departments (Score: 1.000)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Association of Honduran Maquilas (AHM)

El Valle de Sula is the economic engine of the country, producing 35% of the country’s GDP through the textile manufacturing industry. The area is also considered to be very vulnerable to natural hazards. Recognizing this vulnerability, an EU-funded initiative in partnership with DIPECHO-TROCAIRE and the Honduran Association of Maquilas (AHM) devised a program to develop “a culture of prevention.” The program established local emergency committees that receive and conduct trainings in the handling of HAZMAT, evacuation procedures, CPR, use of rescue equipment, etc. While the program initially focused on industrial-related hazards “internal” to factories, it was soon recognized that with 40% of workers living in vulnerable areas, a disaster occurrence had the potential to significantly interrupt production. The program now engages surrounding communities, and is developing a hazard-monitoring capability as an extension (redundant capability) of COPECO.



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: 18 of 18 Departments (Score: 0.265) Despite having relatively low vulnerability overall, Cortés ranks 7th in Environmental Stress. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

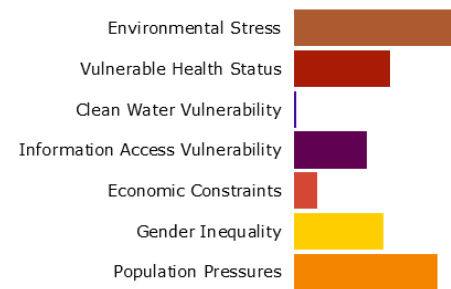


Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	16.2% Forest Loss Due to Pine Beetle Plague	39.1% Water Shortage Area					
	Vulnerable Health Status	13.7 Infant Mortality Rate	238.8 Maternal Mortality Ratio	75.9 Life Expectancy (years)	1.1% Acute Malnutrition Rate	1.4% Population Disabled	0.307 Communicable Disease Sub-Index ⁴	0.164 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	95.5% Households Access to Piped Water	89.1% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	8.6% Adult Illiteracy	6.9 Average Years of Schooling	93.6% Enrollment in Basic Education	86.5% Households without Internet	13.0% Households without TV	31.2% Households without Radio	
	Economic Constraints	0.61 Economic Dependency Ratio	43.1% Population in Poverty	0.17 GINI Coefficient				
	Gender Inequality	0.57 Ratio of Female to Male Land Ownership Rate	1.11 Ratio of Female to Male Home Ownership Rate	0.44 Ratio of Female to Male Economic Activity	1.00 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.5% Average Annual Population Change	5.0% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 4 of 18 Departments (Score: 0.629) Cortés exhibits weaker Coping Capacity in the areas of Governance and Health Care Capacity. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

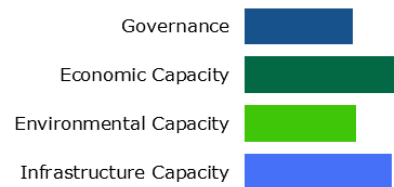


Table 4. Component scores for each coping capacity subcomponent

	Governance	90.4 Homicides per 100k Persons	238.8 Sexual Violence and Assault per 100k Persons	39.8% Households with Public Garbage Collection	53.5% Voter Participation (2013 Election)	
	Economic Capacity	37.8% Economic Activity Rate	96.9% Employment Rate	32.9% Population in Highest Wealth Quintile		
	Environmental Capacity	25.3% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.8 Hospital Beds per 10,000 Persons	2.3 Physicians per 10,000 Persons	5.5 Nurses per 10,000 Persons	22.1 km Average Distance to Nearest Hospital	75.6% Children Completed Immunization Schedule
	Communications Capacity	22.6% Households with Access to Fixed Phone Line	73.8% Households with Access to Mobile Phone			
	Transportation Capacity	22.1 km Average Distance to Nearest Port or Airport	26.6 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 16 of 18 Departments (Score: 0.318)

Cortés' Lack of Resilience score and ranking are due to very low Vulnerability combined with high Coping Capacity scores.

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



Governance



Health Care Capacity



Environmental Stress

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 4 of 18 Departments (Score: 0.545)

Cortés' Multi-Hazard Risk score and ranking are driven primarily by its very high Multi-Hazard Exposure combined with very low Vulnerability and high Coping Capacity scores.

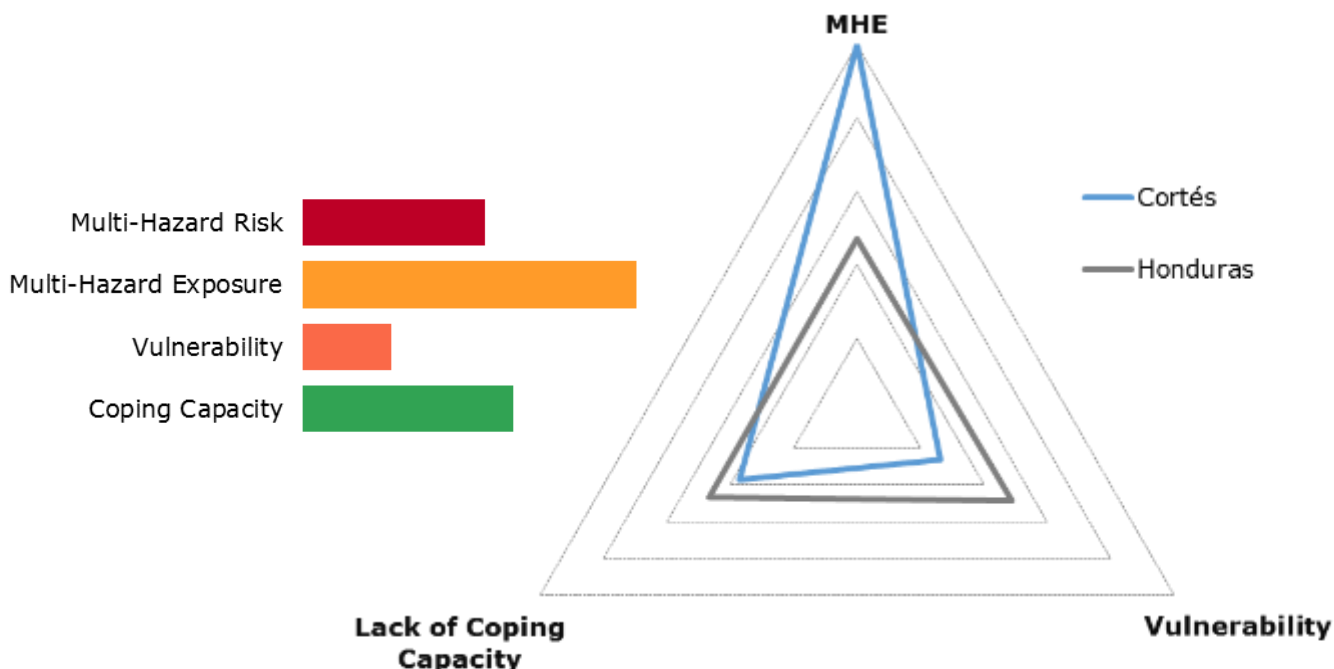


Figure 50. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 vulnerable health status

Ranked 18 of 18 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



Lowest economic constraints

Ranked 18 of 18 departments, low economic constraints indicate that Cortés may be able to invest in additional mitigation and preparedness measures at the local and community level.



Lowest overall vulnerability

Ranked 18 of 18 departments, low overall vulnerability indicates that Cortés is less susceptible to the negative impacts of a disaster and will likely recover faster after an event.

Recommendations

01

Promote drought-resistant farming methods

A high percentage of the department is at risk of drought. Programs that promote drought-resistant crops and farming methods will decrease vulnerability to drought in the department.

02

Increase government services

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

03

Provide health education and access

Increased early health education and access for special-needs populations and new/expectant mothers can decrease health vulnerability. Additional health-care infrastructure (doctors and nurses) will increase access to critical services before, during, and after disaster events.



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El Paraíso

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

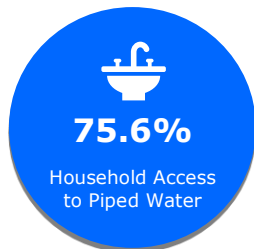
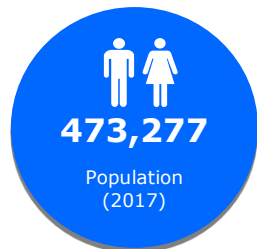
Department: El Paraíso



Department Capital: Yuscarán

Area: 7,489 km²

El Paraíso is located in eastern Honduras, south of Olancho. The department shares a border with Nicaragua. The economy of El Paraíso is based on livestock and agriculture, producing corn, coffee, sugar cane, watermelon, sorghum, tomato, beans, and tobacco.



Municipality	Population
Alauca	9,433
Danlí	210,742
El Paraíso	45,920
Guinope	9,107
Jacaleapa	4,186
Liure	10,852
Moroce lí	17,764
Oropolí	6,090
Potreri llos	4,663
San Antonio de Flores	5,783
San Lucas	8,057
San Matías	5,321
Soledad	9,352
Teupasenti	45,417
Texiguat	8,841
Trojes	51,011
Vado Ancho	4,071
Yauyupe	1,394
Yuscarán	15,271



**Multi-Hazard Risk Rank:
Moderate (7 of 18)**

**Lack of Resilience Rank:
Very High (3 of 18)**

RVA Component Scores

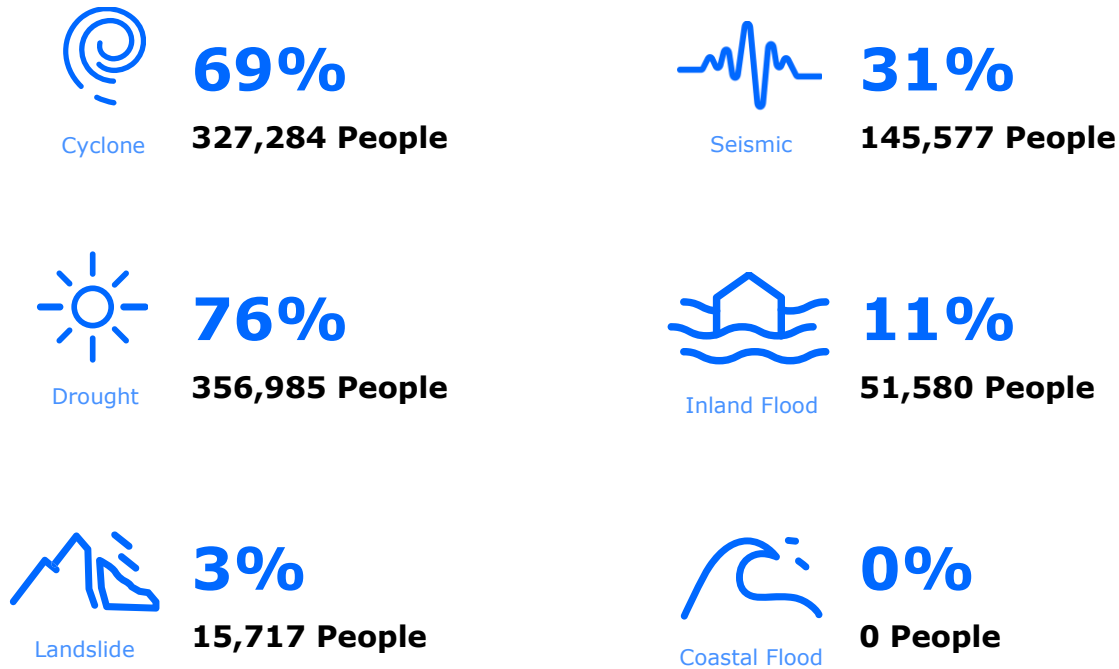
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Moderate		Very High		Low		Very High		Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.514	7	0.552	3	0.438	11	0.598	3	0.494	13

Multi-Hazard Exposure (MHE)

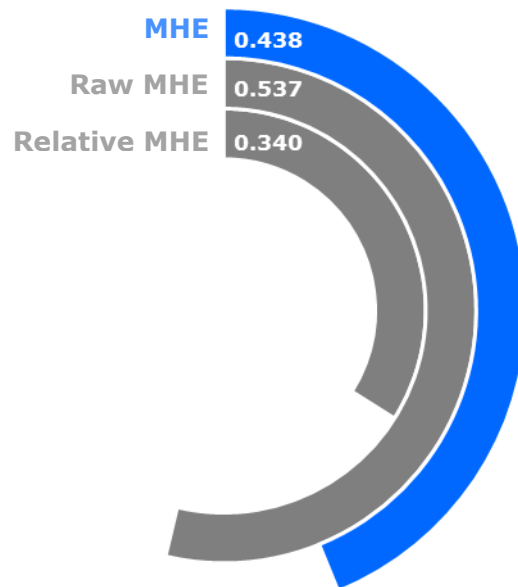
Multi-Hazard Exposure¹ Rank: 11 of 18 Departments (Score: 0.438)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Disaster-Management Facility in Danlí

SOUTHCOM funded the construction of a facility in Danlí (El Paraíso Department) that provides warehouse and office space for COPECO. The facility was completed in 2015 and provides space for an EOC and communications room, meeting space for the CODED, as well secure storage for relief supplies and rescue equipment.



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 18 Departments (Score: 0.598) Vulnerability in El Paraíso is strongly influenced by Gender Inequality, Clean Water Vulnerability, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

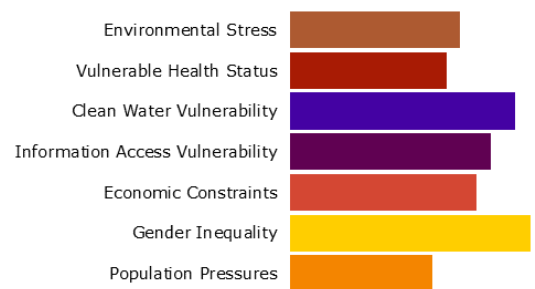









Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	15.3% Forest Loss Due to Pine Beetle Plague	43.8% Water Shortage Area					
	Vulnerable Health Status	21.3 Infant Mortality Rate	146.2 Maternal Mortality Ratio	74.4 Life Expectancy (years)	1.3% Acute Malnutrition Rate	2.8% Population Disabled	0.341 Communicable Disease Sub-Index ⁴	0.291 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	75.6% Households Access to Piped Water	55.1% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	18.5% Adult Illiteracy	5.9 Average Years of Schooling	88.5% Enrollment in Basic Education	95.9% Households without Internet	51.9% Households without TV	31.7% Households without Radio	
	Economic Constraints	0.69 Economic Dependency Ratio	61.4% Population in Poverty	0.39 GINI Coefficient				
	Gender Inequality	0.39 Ratio of Female to Male Land Ownership Rate	0.86 Ratio of Female to Male Home Ownership Rate	0.20 Ratio of Female to Male Economic Activity	1.11 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.2% Average Annual Population Change	5.9% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 13 of 18 Departments (Score: 0.494) El Paraíso exhibits weaker Coping Capacity in the areas of Environmental Capacity and Infrastructure (Health Care and Transportation). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

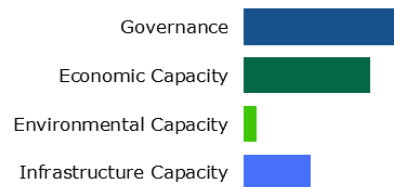









Table 4. Component scores for each coping capacity subcomponent

	Governance	23.8 Homicides per 100k Persons	129.8 Sexual Violence and Assault per 100k Persons	22.0% Households with Public Garbage Collection	72.8% Voter Participation (2013 Election)	
	Economic Capacity	36.4% Economic Activity Rate	98.5% Employment Rate	9.4% Population in Highest Wealth Quintile		
	Environmental Capacity	6.2% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	2.9 Hospital Beds per 10,000 Persons	1.4 Physicians per 10,000 Persons	5.5 Nurses per 10,000 Persons	37.1 km Average Distance to Nearest Hospital	86.8% Children Completed Immunization Schedule
	Communications Capacity	10.7% Households with Access to Fixed Phone Line	55.2% Households with Access to Mobile Phone			
	Transportation Capacity	72.7 km Average Distance to Nearest Port or Airport	20.4 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 3 of 18 Departments (Score: 0.552)

El Paraíso's Lack of Resilience score and ranking are due to very high Vulnerability combined with low Coping Capacity scores.

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



Gender Inequality



Clean Water Vulnerability



Infrastructure

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 7 of 18 Departments (Score: 0.514)

El Paraíso's Multi-Hazard Risk score and ranking are due to low Multi-Hazard Exposure combined with very high Vulnerability and low Coping Capacity scores.

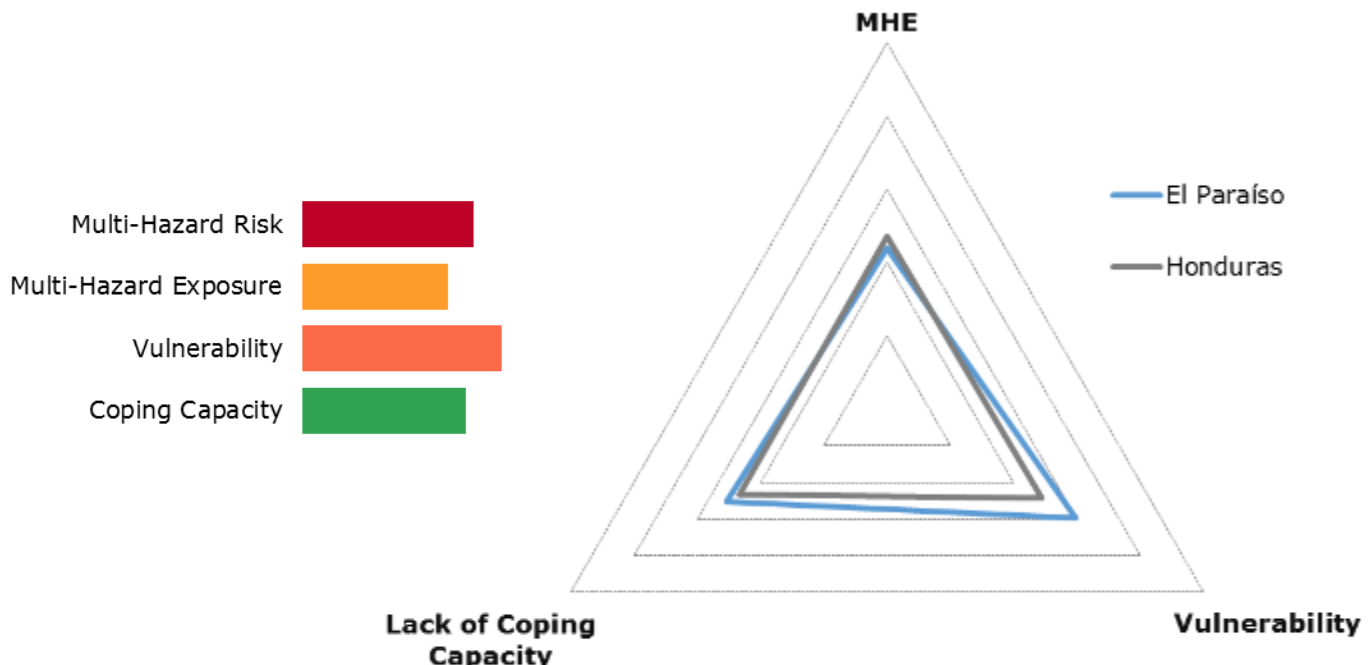


Figure 51. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.

Recommendations

01

Provide opportunities for women

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

02

Increase government water services

Investments in public water and sewer facilities will help to decrease vulnerability and increase access to clean water during a disaster.

02

Invest in communication infrastructure

Invest in communication infrastructure to support coordinated action among local, municipal, and regional actors.



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Francisco Morazán

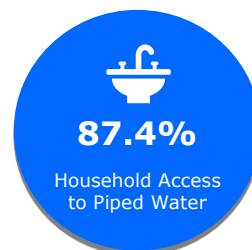
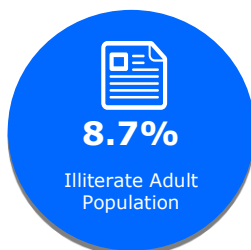
**Honduras National Disaster Preparedness Baseline Assessment
Department Profile**

Department: Francisco Morazán

Department Capital: Tegucigalpa

Area: 8,619 km²

Francisco Morazán is located in central Honduras. The department capital of Tegucigalpa is also the national capital and home to the central government. Tegucigalpa is Honduras' largest and most populous city as well as the nation's political and administrative center.



Municipality	Population
Alubarén	5,576
Cedros	26,003
Curarén	20,924
Distrito Central	1,225,043
El Porvenir	23,655
Guaimaca	29,923
La Venta	6,421
Lepaterique	21,767
Maraita	6,927
Marale	9,199
Ojojona	11,017
Orica	14,604
Reitoca	10,761
Sabanagrande	21,781
San Antonio de Oriente	15,598
San Buenaventura	3,029
San Ignacio	9,119
San Juan de Flores	16,857
Santa Ana	16,889
Santa Lucía	14,065
Talanga	36,733
Tatumbula	8,018
Valle de Angeles	18,476
Vallecillo	8,542



Multi-Hazard Risk Rank: Low (11 of 18)

Lack of Resilience Rank: Very Low (17 of 18)

RVA Component Scores

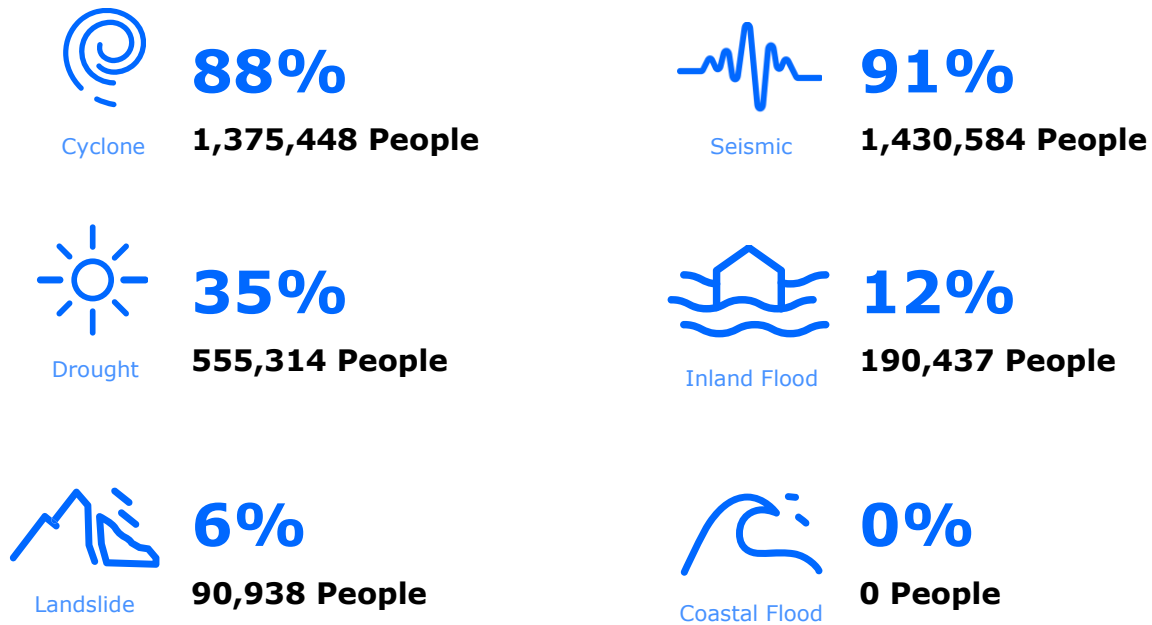
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Low		Very Low		Very High		Very Low		Very High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.458	11	0.314	17	0.747	2	0.298	16	0.670	3

Multi-Hazard Exposure (MHE)

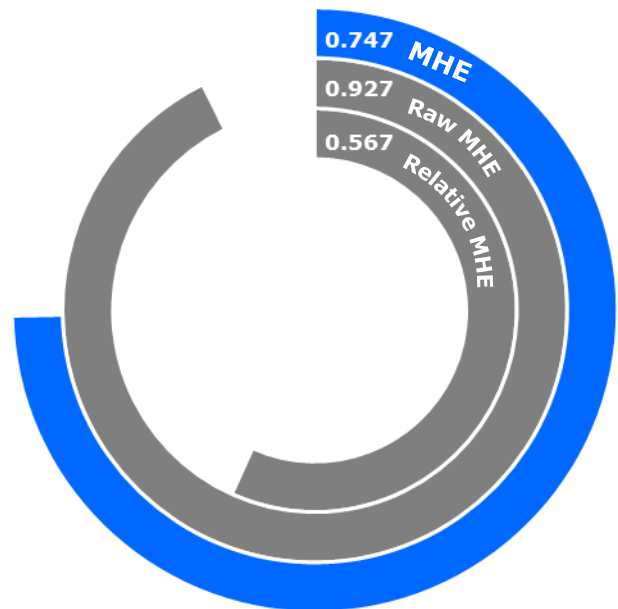
Multi-Hazard Exposure¹ Rank: 2 of 18 Departments (Score: 0.747)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Tegucigalpa CODEM

The Tegucigalpa CODEM maintains an emergency communications center staffed 24/7, has a designated Emergency Operations Center, and stores relief supplies on site. The CODEM supports 160 local emergency-management committees or CODELs, which are comprised of 11 volunteers who are trained to respond during emergencies. The CODELs are provided with basic tools and uniforms and participate in training at COPECO. Tegucigalpa also maintains the Sistema de Información Municipal sobre Riesgos y Estudios Territoriales (SIMRET), an information system being designed to serve as a central repository for risk-management information among numerous agencies within Tegucigalpa.



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: 16 of 18 Departments (Score: 0.298). Despite having very low vulnerability overall, Francisco Morazán ranks 4th in Environmental Stress. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

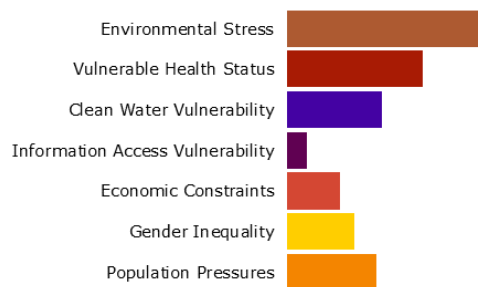


Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	30.8% Forest Loss Due to Pine Beetle Plague	30.2% Water Shortage Area					
	Vulnerable Health Status	16.1 Infant Mortality Rate	206.9 Maternal Mortality Ratio	77.1 Life Expectancy (years)	1.5% Acute Malnutrition Rate	2.4% Population Disabled	0.590 Communicable Disease Sub-Index ⁴	0.491 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	87.4% Households Access to Piped Water	74.6% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	8.7% Adult Illiteracy	7.9 Average Years of Schooling	95.9% Enrollment in Basic Education	82.4% Households without Internet	16.8% Households without TV	25.8% Households without Radio	
	Economic Constraints	0.57 Economic Dependency Ratio	47.0% Population in Poverty	0.26 GINI Coefficient				
	Gender Inequality	0.61 Ratio of Female to Male Land Ownership Rate	1.00 Ratio of Female to Male Home Ownership Rate	0.48 Ratio of Female to Male Economic Activity	1.05 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.3% Average Annual Population Change	3.2% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 3 of 18 Departments (Score: 0.670)

Francisco Morazán exhibits weaker Coping Capacity in the areas of Environmental Capacity and Transportation Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

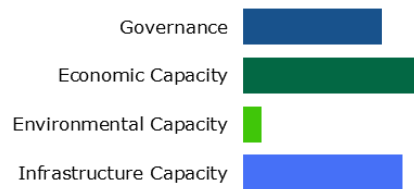









Table 4. Component scores for each coping capacity subcomponent

	Governance	65.5 Homicides per 100k Persons	373.4 Sexual Violence and Assault per 100k Persons	38.5% Households with Public Garbage Collection	67.1% Voter Participation (2013 Election)	
	Economic Capacity	39.7% Economic Activity Rate	96.8% Employment Rate	35.8% Population in Highest Wealth Quintile		
	Environmental Capacity	6.8% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	13.0 Hospital Beds per 10,000 Persons	6.2 Physicians per 10,000 Persons	15.0 Nurses per 10,000 Persons	33.1 km Average Distance to Nearest Hospital	85.2% Children Completed Immunization Schedule
	Communications Capacity	40.6% Households with Access to Fixed Phone Line	74.5% Households with Access to Mobile Phone			
	Transportation Capacity	38.2 km Average Distance to nearest Port or Airport	18.2 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 17 of 18 Departments (Score: 0.314)

Francisco Morazán’s Lack of Resilience score and ranking are due to very low Vulnerability combined with very high Coping Capacity scores.

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



Environmental Stress



Transportation Infrastructure



Environmental Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 11 of 18 Departments (Score: 0.458)

Though Francisco Morazán exhibits a very high Multi-Hazard Exposure score, it is combined with very low Vulnerability and very high Coping Capacity scores, equating to low relative risk overall.

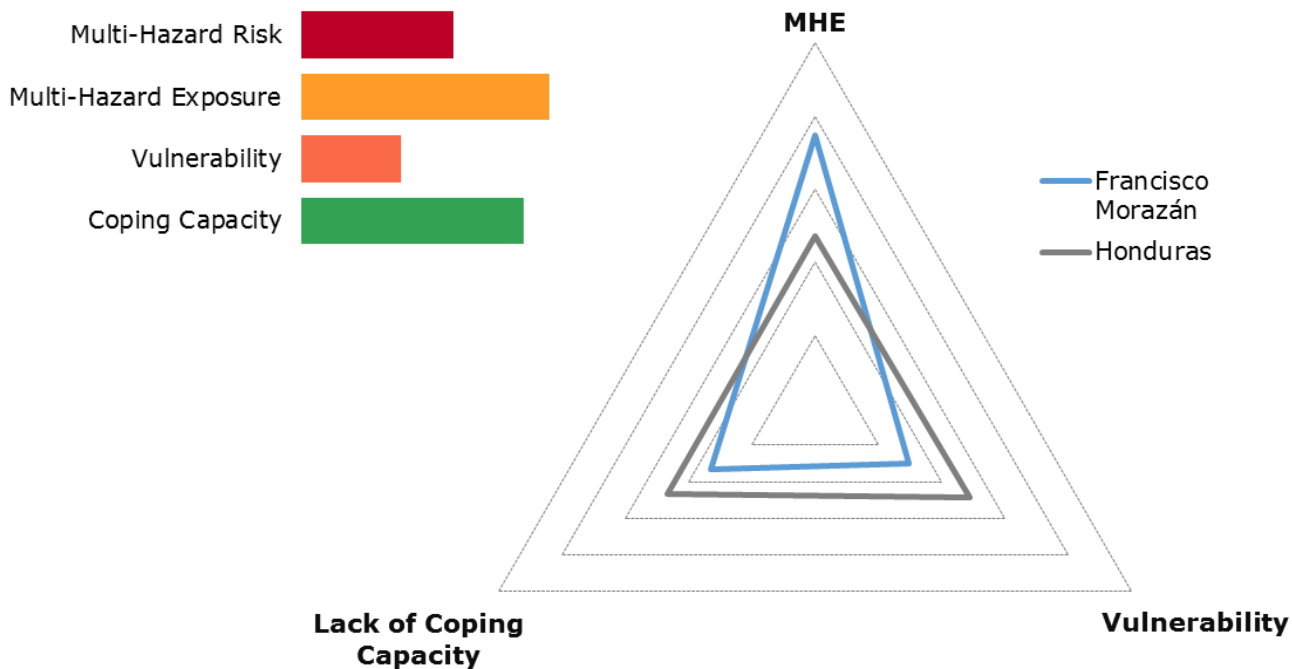


Figure 52. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 18 of 18 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 economic constraints

Ranked 16 of 18 departments, low economic constraints indicate that Francisco Morazán may be able to invest in additional mitigation and preparedness measures at the local and community level.



High overall infrastructure capacity

Ranked 2 of 18 departments, well-developed infrastructure – communication, health care, transportation - facilitates the exchange of information and physical distribution of goods and services to the population.

Recommendations

01

Institutionalize multi-hazard planning and education

Multi-Hazard Risk in Francisco Morazán is driven primarily by exposure. Develop a departmental multi-hazard mitigation plan to acknowledge exposure to multiple hazards. Engage the public in this process to promote an understanding of multi-hazard risk.

02

Increase environmental programs

Invest in programs to provide protection for the environment, including protected lands and reforestation projects, to increase the ability of the environment to recover after a disaster.

03

Invest in infrastructure

Invest in Transportation and Communication Infrastructures to increase coping capacity and resiliency within the department.



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Gracias a Dios

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

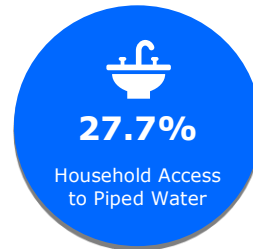
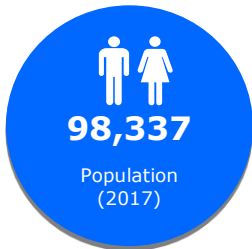
Department: Gracias a Dios



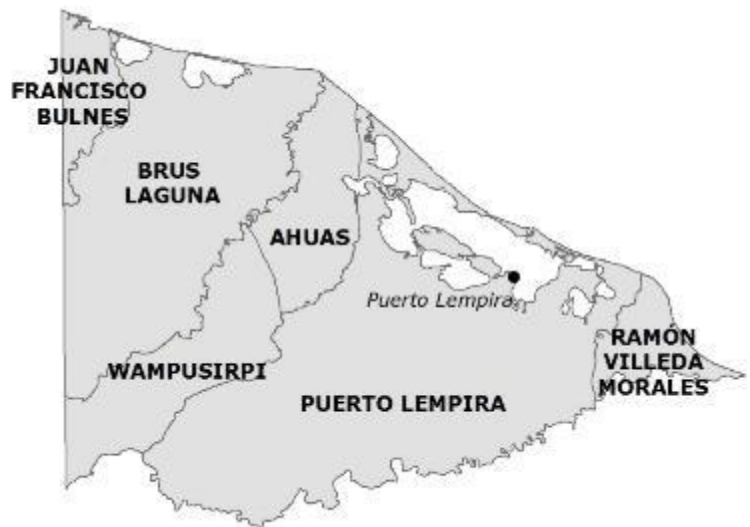
Department Capital: Puerto Lempira

Area: 16,997 km²

Once part of the Mosquito Coast, Gracias a Dios is the easternmost department in northern Honduras. The department is relatively isolated and sparsely populated, containing extensive pine savannas, swamps, and rainforests. Gracias a Dios has the highest poverty rate in Honduras, and lowest access to piped water and sanitation.



Municipality	Population
Ahuas	8,694
Brus Laguna	13,801
Juan Francisco Bulnes	6,428
Puerto Lempira	53,131
Villeda Morales	10,365
Wampusirpi	5,919



**Multi-Hazard Risk Rank:
Very High (1 of 18)**

**Lack of Resilience Rank:
Very High (1 of 18)**

RVA Component Scores

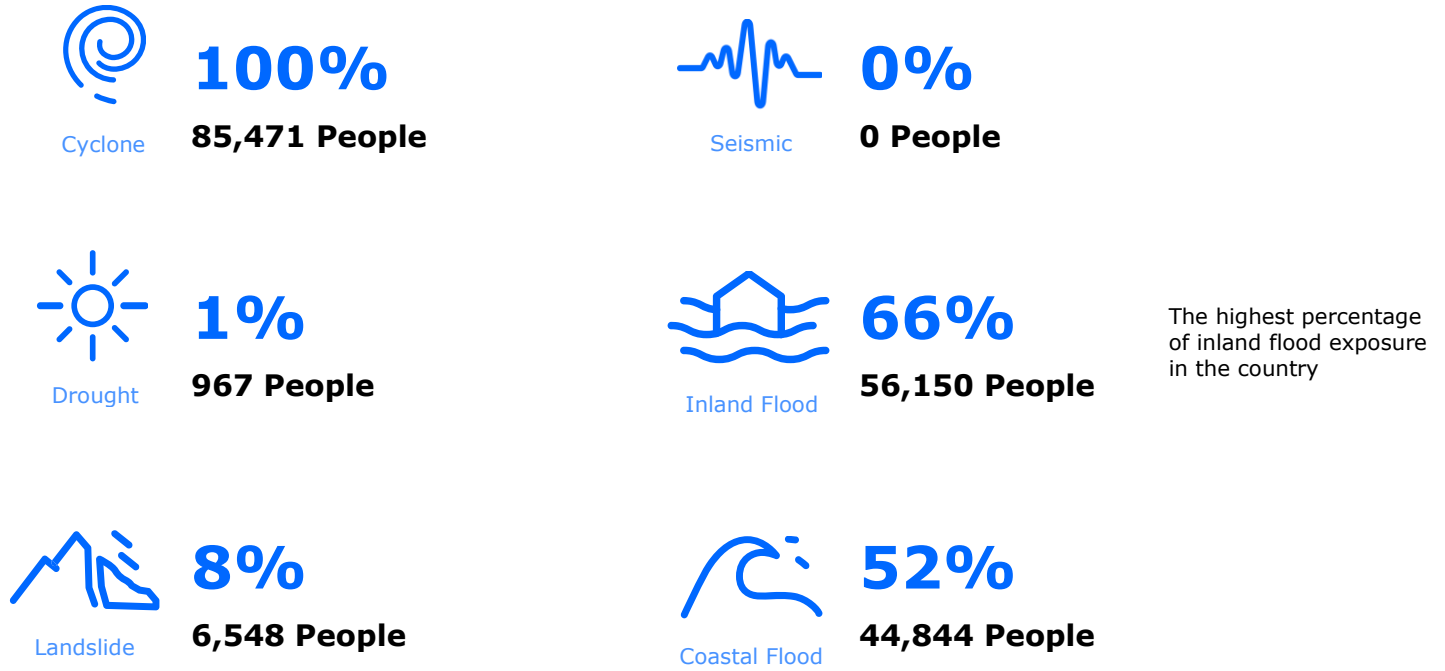
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		Very High		Low		Very High		Very Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.573	1	0.696	1	0.326	12	0.639	1	0.247	18

Multi-Hazard Exposure (MHE)

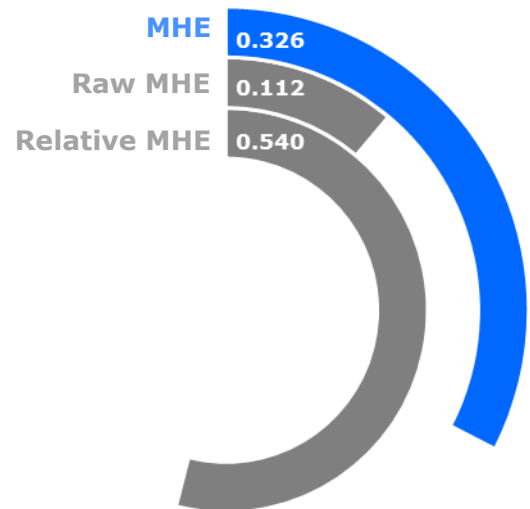
Multi-Hazard Exposure¹ Rank: 12 of 18 Departments (Score: 0.326)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Remote Territory

Gracias a Dios is the second largest department in Honduras, but the least densely populated with less than six people per km². The department is inaccessible by land, and most roads in the department are not paved. Despite its remoteness and low population density, Gracias a Dios suffers from relatively high crime. Due to its vast size and the Honduran government’s relatively low ability to fight crime in the area, trafficking of narcotics is common in Gracias a Dios. Criminal organizations are also common in the area. Remoteness and high crime rates indicate that Gracias a Dios may have less capacity to cope with the effects of a disaster.



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: 1 of 18 Departments (Score: 0.639) Vulnerability in Gracias a Dios is strongly influenced by Clean Water Vulnerability, Population Pressures, Economic Constraints, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Vulnerability score.

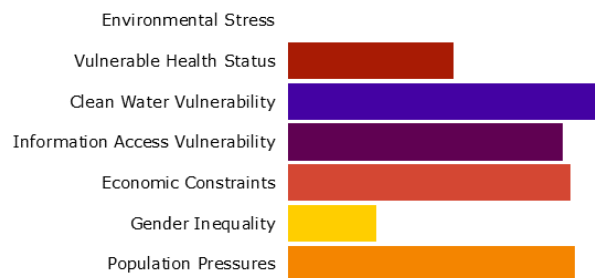









Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	0% Forest Loss Due to Pine Beetle Plague	0% Water Shortage Area					
	Vulnerable Health Status	15.1 Infant Mortality Rate	186.9 Maternal Mortality Ratio	74.5 Life Expectancy (years)	0.9% Acute Malnutrition Rate	2.5% Population Disabled	0.671 Communicable Disease Sub-Index ⁴	0.731 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	27.7% Households Access to Piped Water	8.4% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	16.0% Adult Illiteracy	5.9 Average Years of Schooling	85.3% Enrollment in Basic Education	98.3% Households without Internet	77.2% Households without TV	71.2% Households without Radio	
	Economic Constraints	0.79 Economic Dependency Ratio	89.4% Population in Poverty	0.38 GINI Coefficient				
	Gender Inequality	0.61 Ratio of Female to Male Land Ownership Rate	1.15 Ratio of Female to Male Home Ownership	0.52 Ratio Female to Male Economic Activity	1.01 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.9% Average Annual Population Change	16.6% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 18 of 18 Departments (Score: 0.247)

Gracias a Dios exhibits weaker Coping Capacity in the areas of Economic Capacity, Governance and Infrastructure (especially Communications). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

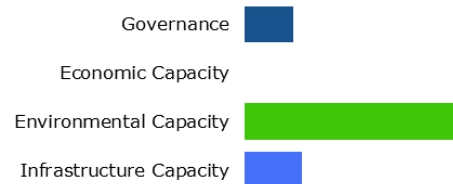


Table 4. Component scores for each coping capacity subcomponent

	Governance	27.5 Homicides per 100k Persons	234.0 Sexual Violence and Assault per 100k Persons	1.0% Households with Public Garbage Collection	45.6% Voter Participation (2013 Election)	
	Economic Capacity	30.0% Economic Activity Rate	94.4% Employment Rate	1.1% Population in Highest Wealth Quintile		
	Environmental Capacity	60.2% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	3.5 Hospital Beds per 10,000 Persons	7.7 Physicians per 10,000 Persons	14.6 Nurses per 10,000 Persons	74.8 km Average Distance to Nearest Hospital	67.6% Children Completed Immunization Schedule
	Communications Capacity	2.9% Households with Access to Fixed Phone Line	36.9% Households with Access to Mobile Phone			
	Transportation Capacity	25.5 km Average Distance to Nearest Port or Airport	2.1 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 1 of 18 Departments (Score: 0.696)

Gracias a Dios' Lack of Resilience score and ranking are due to very high Vulnerability combined with very low Coping Capacity scores.

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



**Clean Water
Vulnerability**



**Economic
Capacity**



**Population
Pressures**

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 1 of 18 Departments (Score: 0.573)

Gracias a Dios' Multi-Hazard Risk score and ranking are due to low Multi-Hazard Exposure combined with very high Vulnerability and very low Coping Capacity scores.

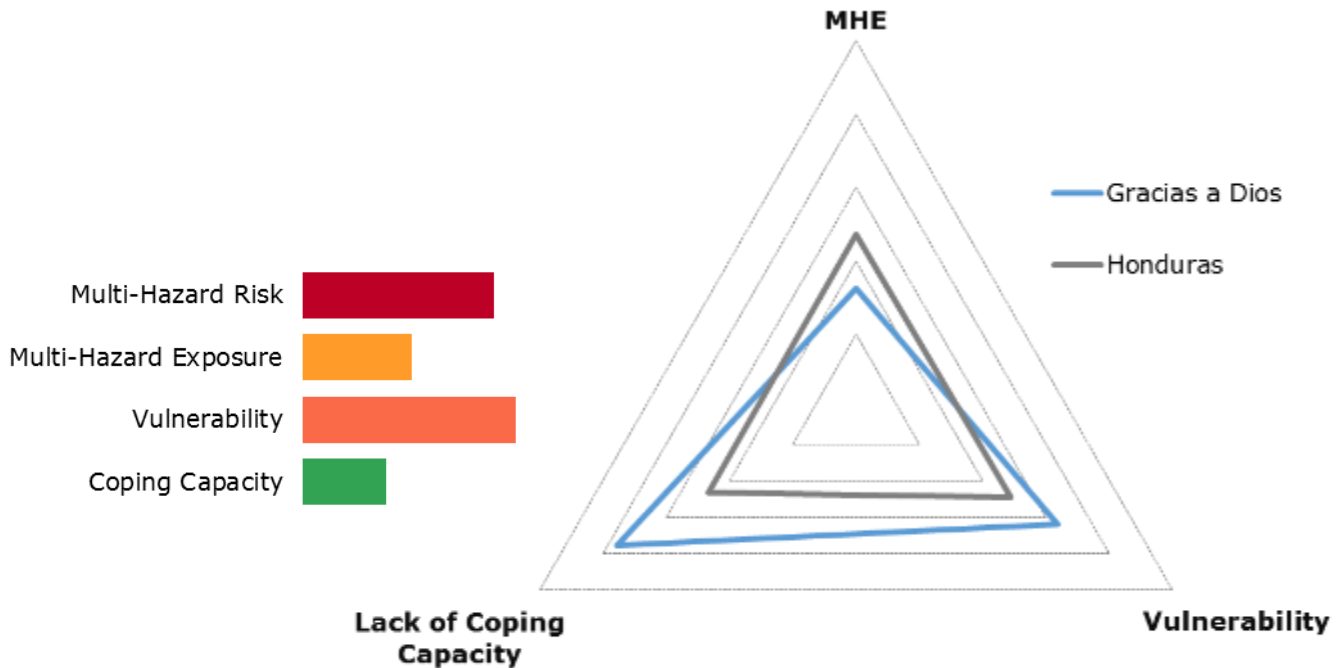


Figure 53. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 environmental stress

Ranked 17th (tied with Islas de la Bahía) of 18 departments, low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.



Highest environmental capacity

Ranked 1 of 18 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 gender inequality

Ranked 16 of 18 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.

Recommendations

01

Increase water and sanitation services

Invest in public water and waste facilities to increase water quality and access and reduce the spread of disease.

02

Increase economic opportunity

Invest in business development and public education to increase economic capacity.

03

Reduce population pressure

Rapid population changes are difficult to plan for and can destabilize social, economic, and environmental systems. Analyze trends in the department to determine potential population changes, and update plans and SOPs more frequently to accommodate the changes.



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Intibucá

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

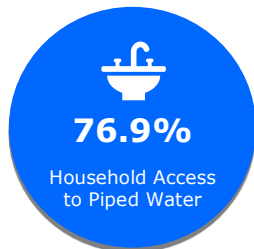
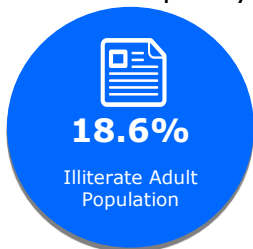
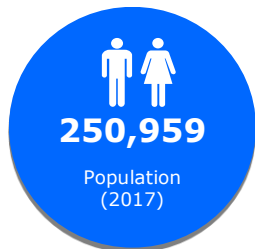
Department: Intibucá



Department Capital: La Esperanza

Area: 3,123 km²

Intibucá is located in western Honduras, in the most mountainous region of the country. La Esperanza, the capital city, is known for having the coolest climate in Honduras. It is considered the heart of the Ruta Lenca (Lenca Trail), a region of Lenca ethnic influence that spans Honduras from Santa Rosa de Copán to Choluteca. Intibucá has the highest income inequality rate in Honduras.



Municipality	Population
Camasca	6,977
Colomoncagua	18,737
Concepción	10,557
Dolores	5,537
Intibucá	61,695
Jesus de Otoro	30,663
La Esperanza	13,413
Magdalena	4,489
Masaguara	16,794
San Antonio	5,658
San Fco. De Opalaca	12,024
San Isidro	4,812
San Juan	14,390
San Marcos de Sierra	9,285
San Miguelito	8,236
Santa Lucía	5,434
Yamaranguila	22,258



Multi-Hazard Risk Rank: Low (13 of 18)

Lack of Resilience Rank: High (5 of 18)

RVA Component Scores

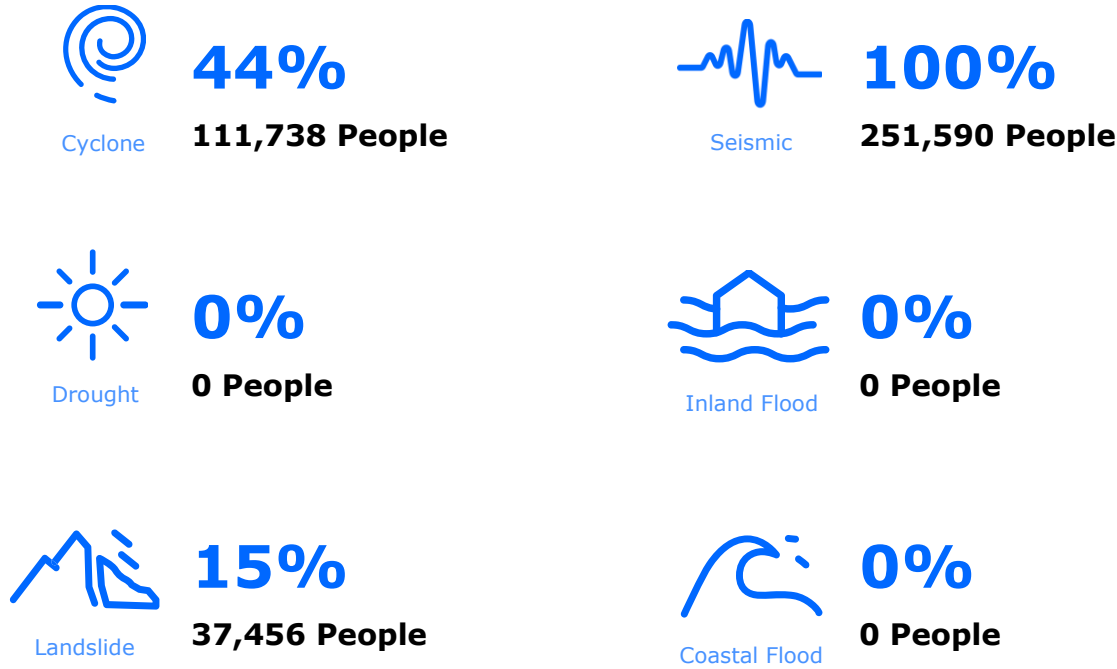
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Low		High		Very Low		High		Moderate	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.432	13	0.527	5	0.242	17	0.570	6	0.516	10

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 17 of 18 Departments (Score: 0.242)

Table 2. Estimated ambient population² exposed to each hazard (2014).

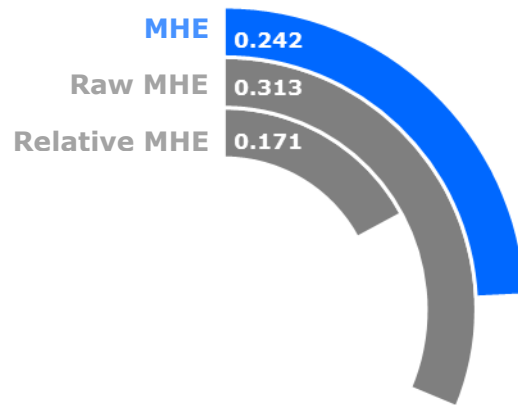


The only department in Honduras with 0% flood exposure, both inland and coastal

Case Study: World Vision

World Vision is active in five municipalities throughout Intibucá department. The goal of their development program is to improve the well-being of children by focusing on community engagement. Programs like this can help decrease vulnerability and increase the coping capacity of vulnerable populations within the department.

https://www.ngoaidmap.org/location/gn_3608833?level=2&site=12



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: 6 of 18 Departments (Score: 0.570) Vulnerability in Intibucá is strongly influenced by Economic Constraints, Information Access Vulnerability, Clean Water Vulnerability, and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

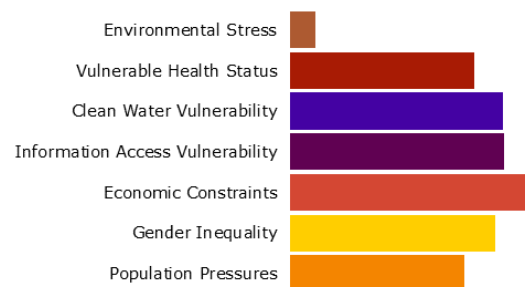


Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	6.1% Forest Loss Due to Pine Beetle Plague	0.3% Water Shortage Area					
	Vulnerable Health Status	19.7 Infant Mortality Rate	261.0 Maternal Mortality Ratio	74.7 Life Expectancy (years)	0.7% Acute Malnutrition Rate	3.5% Population Disabled	0.437 Communicable Disease Sub-Index ⁴	0.269 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	76.9% Households Access to Piped Water	56.3% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	18.6% Adult Illiteracy	5.5 Average Years of Schooling	92.7% Enrollment in Basic Education	97.4% Households without Internet	65.4% Households without TV	34.7% Households without Radio	
	Economic Constraints	0.80 Economic Dependency Ratio	61.8% Population in Poverty	0.42 GINI Coefficient				
	Gender Inequality	0.35 Ratio of Female to Male Land Ownership Rate	0.81 Ratio of Female to Male Home Ownership Rate	0.22 Ratio of Female to Male Economic Activity	1.02 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.4% Average Annual Population Change	7.1% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 10 of 18 Departments (Score: 0.516) Intibucá exhibits weaker Coping Capacity in the areas of Environmental Capacity and Infrastructure (especially Communications and Health Care). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

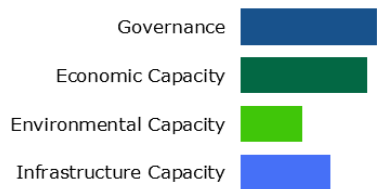









Table 4. Component scores for each coping capacity subcomponent

	Governance	33.1 Homicides per 100k Persons	168.5 Sexual Violence and Assault per 100k Persons	12.2% Households with Public Garbage Collection	75.1% Voter Participation (2013 Election)	
	Economic Capacity	36.4% Economic Activity Rate	99.2% Employment Rate	4.6% Population in Highest Wealth Quintile		
	Environmental Capacity	14.1% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	3.0 Hospital Beds per 10,000 Persons	2.0 Physicians per 10,000 Persons	7.8 Nurses per 10,000 Persons	24.6 km Average Distance to Nearest Hospital	88.8% Children Completed Immunization Schedule
	Communications Capacity	7.6% Households with Access to Fixed Phone Line	50.4% Households with Access to Mobile Phone			
	Transportation Capacity	43.3 km Average Distance to Nearest Port or Airport	24.4 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 5 of 18 Departments (Score: 0.527)

Intibucá's Lack of Resilience score and ranking are due to high Vulnerability combined with moderate Coping Capacity scores.

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



**Economic
Constraints**



**Information
Access
Vulnerability**



**Communications
Infrastructure**

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 13 of 18 Departments (Score: 0.432)

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

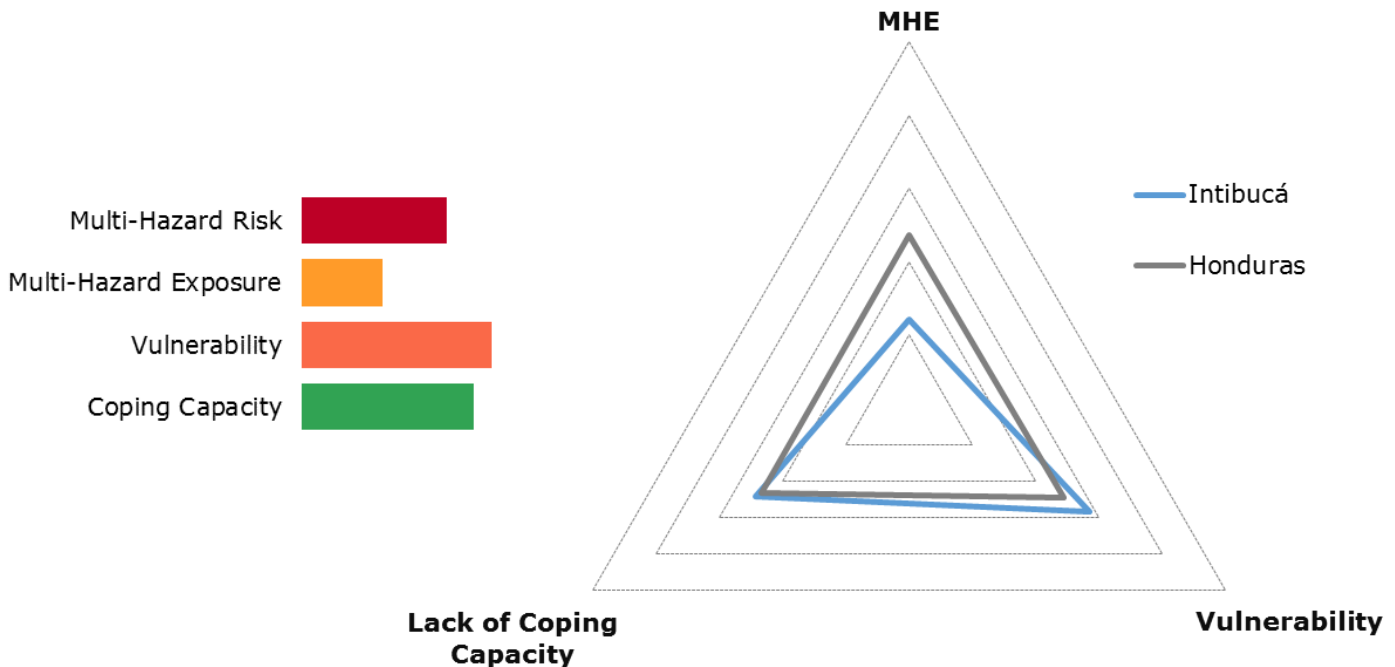


Figure 54. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 environmental stress

Ranked 13 of 18 departments, low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.



High employment rate

Ranked 2 of 18 departments, a high employment rate increases economic capacity increasing the department's ability to invest in additional mitigation and preparedness measures at the local and community level.

Recommendations

01

Increase economic opportunity

Investment in business development and public education to increase economic capacity.

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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Islas de la Bahía

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

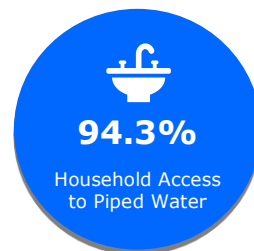
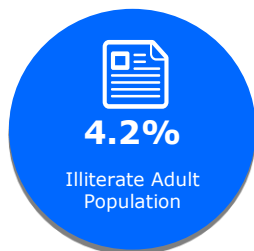
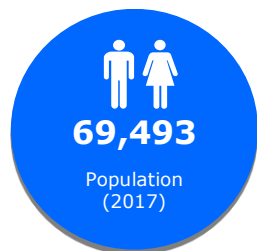
Department: Islas de la Bahía



Department Capital: Roatán

Area: 236 km²

Islas de la Bahía is a group of bay islands off the Caribbean shore of Honduras. The bay islands serve as the anchor of Honduras' growing tourism industry. Tourism and fishing represent half of the gross island product. With dynamic expansion of the tourist and service industry, Islas de la Bahía exhibits ongoing rapid population growth.



Municipality	Population
Guanaja	5,663
José Santos Guardiola	11,823
Roatán	47,608
Utila	4,400



**Multi-Hazard Risk Rank:
Very Low (17 of 18)**

**Lack of Resilience Rank:
Very Low (18 of 18)**

RVA Component Scores

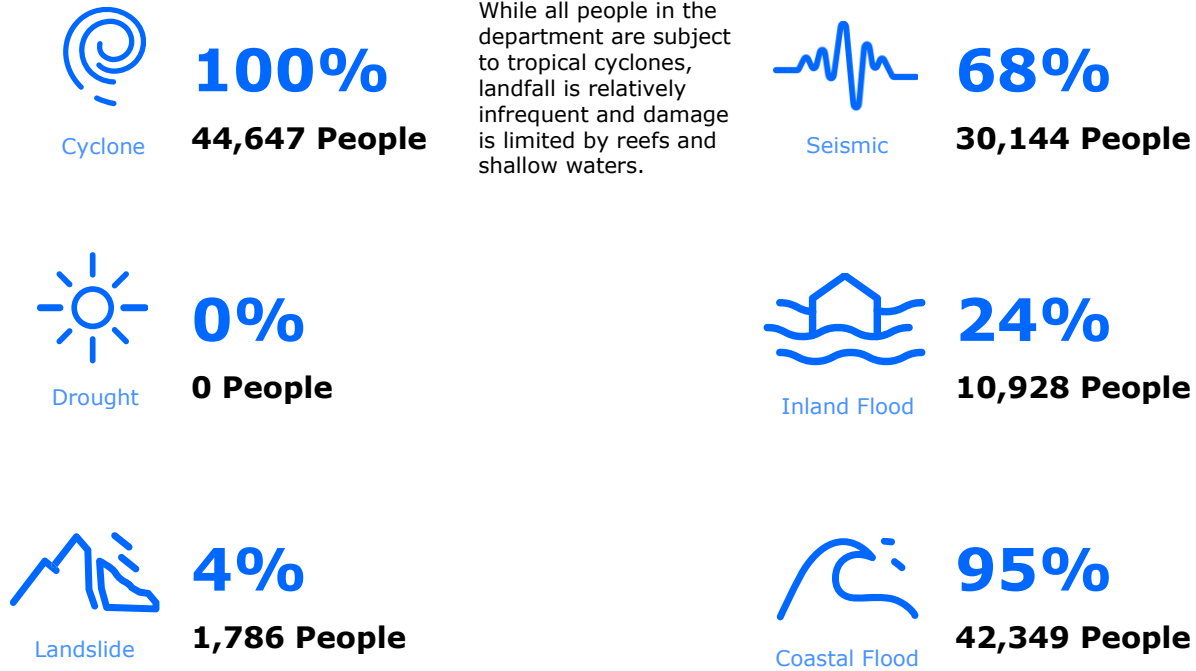
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very Low		Very Low		Moderate		Very Low		Very High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.333	17	0.277	18	0.444	10	0.280	17	0.726	1

Multi-Hazard Exposure (MHE)

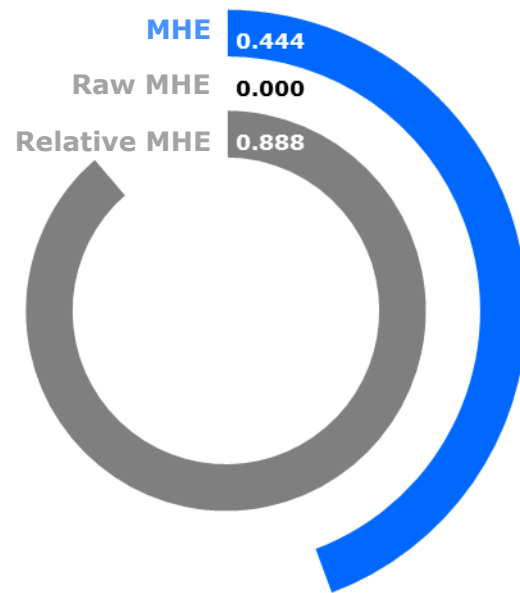
Multi-Hazard Exposure¹ Rank: 10 of 18 Departments (Score: 0.444)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Hurricanes and Roatán

Despite its location in the Caribbean off the northern coast of Honduras, Roatán is not generally considered to have high tropical cyclone occurrence. From 1851-2010, there have been only 35 tropical cyclones to impact the island, including one Category 4 hurricane and one Category 5 hurricane (Mitch). Because the island is surrounded by reefs and shallow water, damage is usually limited when impact does occur.



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: 17 of 18 Departments (Score: 0.280) Despite having low relatively vulnerability overall, Islas de la Bahía ranks 2nd in Population Pressures. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

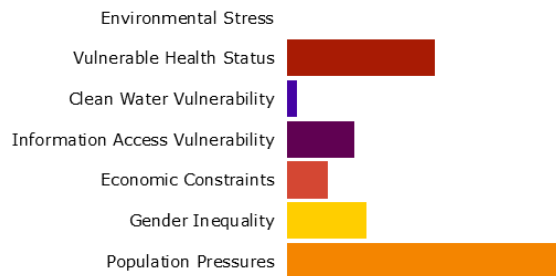









Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	0% Forest Loss Due to Pine Beetle Plague	0% Water Shortage Area					
	Vulnerable Health Status	12.6 Infant Mortality Rate	148.7 Maternal Mortality Ratio	77.6 Life Expectancy (years)	3.7% Acute Malnutrition Rate	2.6% Population Disabled	0.646 Communicable Disease Sub-Index ⁴	0.683 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	94.3% Households Access to Piped Water	89.9% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	4.2% Adult Illiteracy	7.0 Average Years of Schooling	97.0% Enrollment in Basic Education	82.2% Households without Internet	19.3% Households without TV	43.0% Households without Radio	
	Economic Constraints	0.64 Economic Dependency Ratio	40.0% Population in Poverty	0.20 GINI Coefficient				
	Gender Inequality	0.77 Ratio of Female to Male Land Ownership Rate	1.15 Ratio of Female to Male Home Ownership Rate	0.48 Ratio of Female to Male Economic Activity	1.02 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	5.4% Average Annual Population Change	10.6% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 1 of 18 Departments (Score: 0.726) Despite having the highest overall coping capacity in Honduras, Islas de la Bahía exhibits notable weakness in the area of Governance. The bar chart on the right indicates the socioeconomic themes contributing to the department’s overall Coping Capacity score.

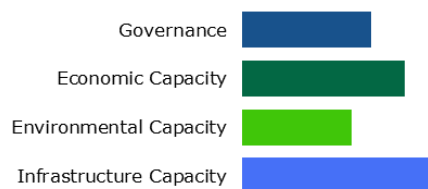









Table 4. Component scores for each coping capacity subcomponent

	Governance	13.7 Homicides per 100k Persons	687.1 Sexual Violence and Assault per 100k Persons	67.5% Households with Public Garbage Collection	55.2% Voter Participation (2013 Election)	
	Economic Capacity	38.7% Economic Activity Rate	96.7% Employment Rate	31.4% Population in Highest Wealth Quintile		
	Environmental Capacity	24.8% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	6.7 Hospital Beds per 10,000 Persons	6.3 Physicians per 10,000 Persons	16.5 Nurses per 10,000 Persons	29.1 km Average Distance to Nearest Hospital	80.4% Children Completed Immunization Schedule
	Communications Capacity	22.9% Households with Access to Fixed Phone Line	79.1% Households with Access to Mobile Phone			
	Transportation Capacity	10.3 km Average Distance to Nearest Port or Airport	42.6 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 18 of 18 Departments (Score: 0.277)

Islas de la Bahía's Lack of Resilience score and ranking are due to very low Vulnerability combined with very high Coping Capacity scores.

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



Population Pressures



Governance



Vulnerable Health Status

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 17 of 18 Departments (Score: 0.333)

Islas de la Bahía's Multi-Hazard Risk score and ranking are due to moderate Multi-Hazard Exposure combined with very low Vulnerability and very high Coping Capacity scores.

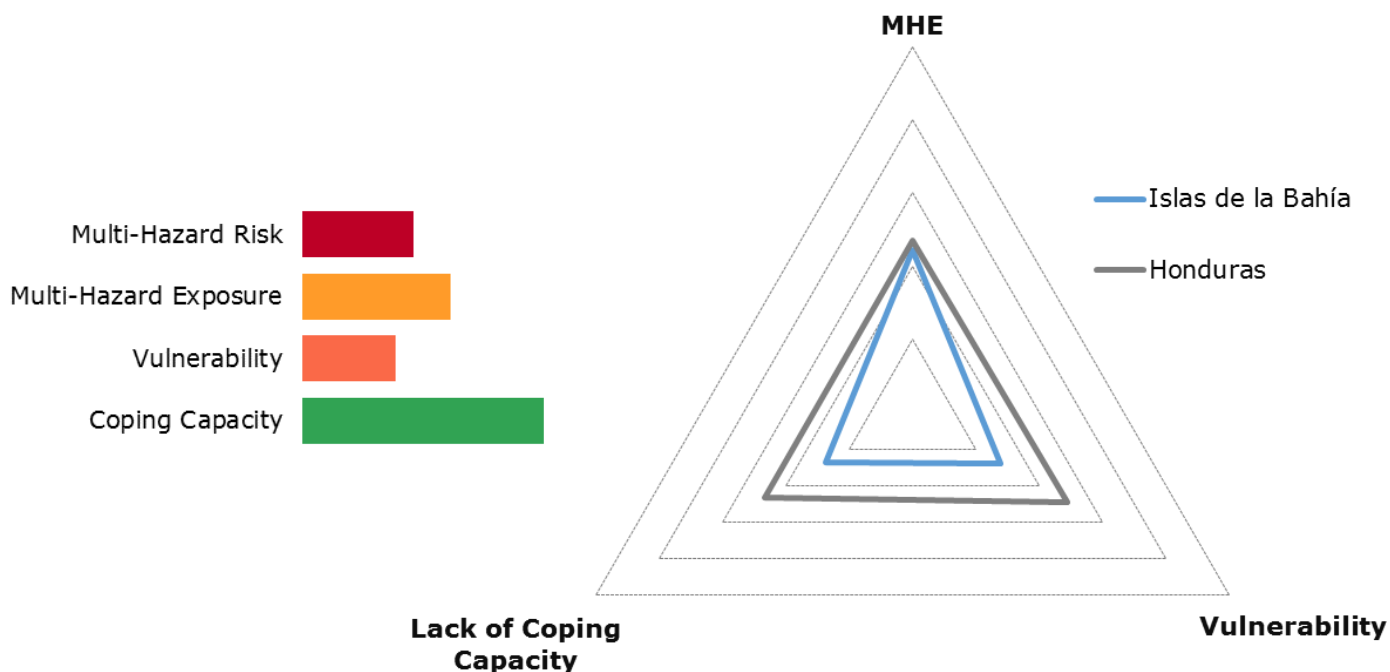


Figure 55. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 transportation capacity

Ranked 1 of 18 departments, well-developed transportation networks facilitate the movement of goods and services, decreasing wait times for response and relief supplies.



Lowest environmental stress

Ranked 17th (tied with Gracias a Dios), low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.



Low economic constraints

Ranked 17 of 18 departments, low economic constraints indicate that Islas de la Bahía may be able to invest in additional mitigation and preparedness measures at the local and community level.

Recommendations

01

Monitor and manage population influx

Invest in a program to manage population influx into the region. Islas de la Bahía'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.

02

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.



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La Paz

**Honduras National Disaster Preparedness Baseline Assessment
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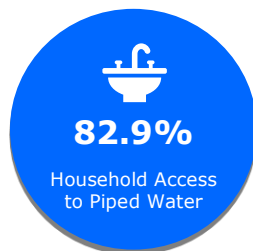
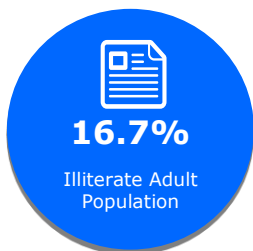
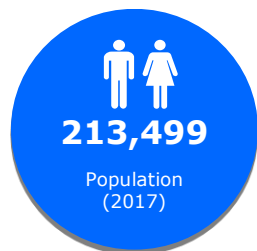
Department: La Paz



Department Capital: La Paz

Area: 2,525 km²

La Paz is located in southwest Honduras, between Francisco Morazán and Intibucá, sharing its southern border with El Salvador. The economy of La Paz is primarily agricultural, producing coffee, wheat, henequin (for rope making), and cattle. Along with Intibucá, La Paz shares the highest income inequality rate in Honduras.



Municipality	Population
Aguanqueterique	4,888
Cabañas	3,579
Cane	4,150
Chinacla	8,366
Guajiquiro	15,317
La Paz	48,640
Lauterique	3,060
Marcala	31,148
Oporo	7,754
San Antonio del Norte	2,851
San José	9,086
San Juan	2,571
San Pedro de Tutule	7,421
Santa Ana	12,486
Santa Elena	13,139
Santa María	11,404
Santiago de Puríngla	16,978
Yarula	9,522
Aguanqueterique	4,888



Multi-Hazard Risk Rank: Low (14 of 18)

Lack of Resilience Rank: Moderate (10 of 18)

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		Very Low		Moderate		Moderate	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.427	14	0.496	10	0.288	16	0.524	10	0.532	9

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 16 of 18 Departments (Score: 0.288)

Table 2. Estimated ambient population² exposed to each hazard (2014).

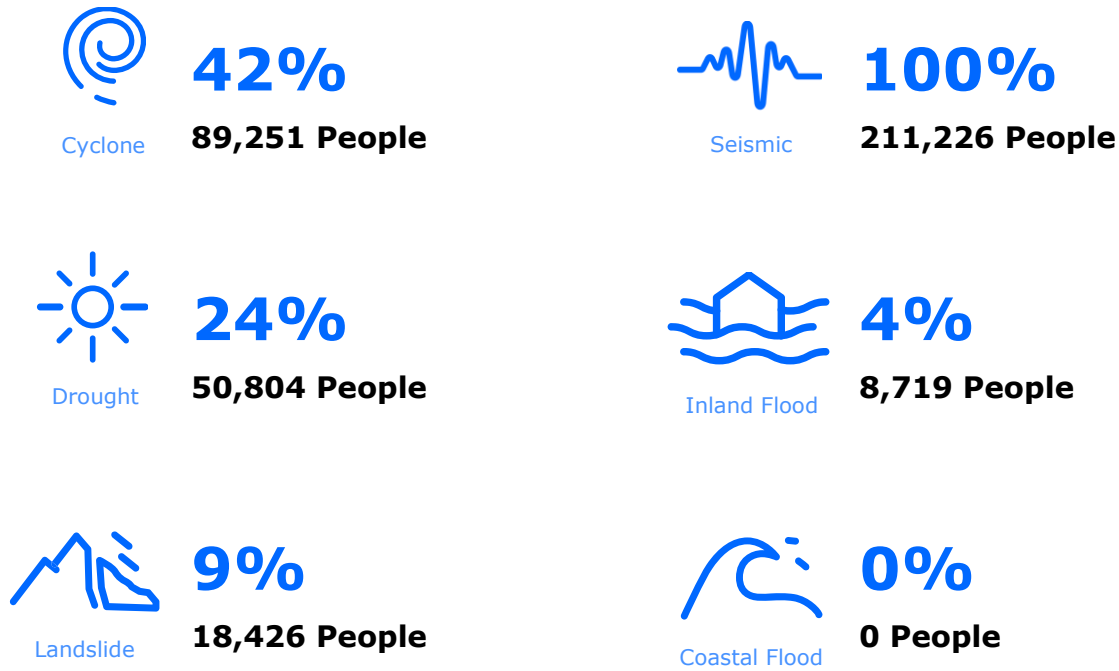
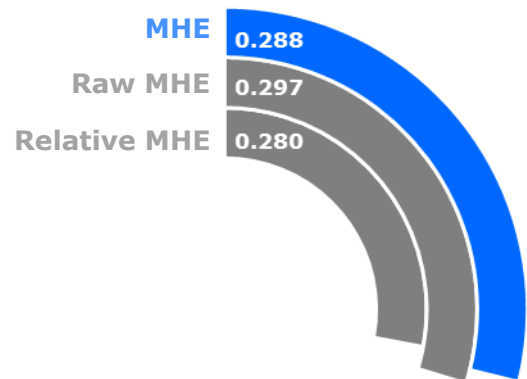


Figure 1. Bridge in La Paz (image credit: Panoramio).



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: 10 of 18 Departments (Score: 0.524) Vulnerability in La Paz is influenced by Economic Constraints, Gender Inequality, and Vulnerable Health Status. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

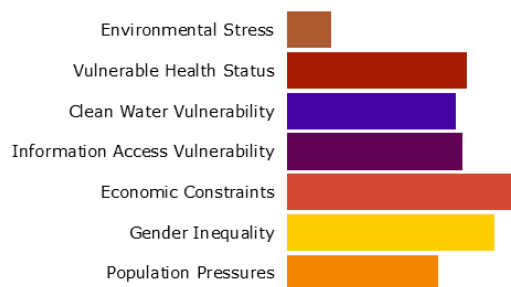









Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	7.0% Forest Loss Due to Pine Beetle Plague	6.3% Water Shortage Area					
	Vulnerable Health Status	23.8 Infant Mortality Rate	181.8 Maternal Mortality Ratio	74.6 Life Expectancy (years)	0.4% Acute Malnutrition Rate	3.4% Population Disabled	0.447 Communicable Disease Sub-Index ⁴	0.352 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	82.9% Households Access to Piped Water	54.5% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	16.7% Adult Illiteracy	5.9 Average Years of Schooling	93.7% Enrollment in Basic Education	96.2% Households without Internet	65.8% Households without TV	30.1% Households without Radio	
	Economic Constraints	0.76 Economic Dependency Ratio	63.1% Population in Poverty	0.42 GINI Coefficient				
	Gender Inequality	0.41 Ratio of Female to Male Land Ownership Rate	0.83 Ratio of Female to Male Home Ownership Rate	0.23 Ratio of Female to Male Economic Activity	1.02 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.3% Average Annual Population Change	6.4% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 9 of 18 Departments (Score: 0.532) La Paz exhibits weaker Coping Capacity in the areas of Infrastructure (especially Transportation and Communication) and Economic Constraints. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

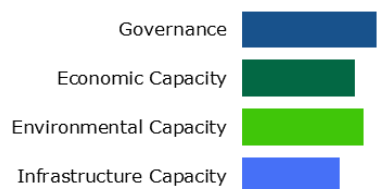









Table 4. Component scores for each coping capacity subcomponent

	Governance	18.4 Homicides per 100k Persons	291.7 Sexual Violence and Assault per 100k Persons	13.6% Households with Public Garbage Collection	74.7% Voter Participation (2013 Election)	
	Economic Capacity	35.0% Economic Activity Rate	98.8% Employment Rate	5.9% Population in Highest Wealth Quintile		
	Environmental Capacity	27.9% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	3.0 Hospital Beds per 10,000 Persons	2.3 Physicians per 10,000 Persons	9.2 Nurses per 10,000 Persons	30.4 km Average Distance to Nearest Hospital	94.4% Children Completed Immunization Schedule
	Communications Capacity	10.9% Households with Access to Fixed Phone Line	54.1% Households with Access to Mobile Phone			
	Transportation Capacity	44.4 km Average Distance to Nearest Port or Airport	19.3 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 10 of 18 Departments (Score: 0.496)

La Paz's Lack of Resilience score and ranking are due to moderate Vulnerability combined with moderate Coping Capacity scores.

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



Economic Constraints



Gender Inequality



Vulnerable Health Status

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 14 of 18 Departments (Score: 0.427)

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

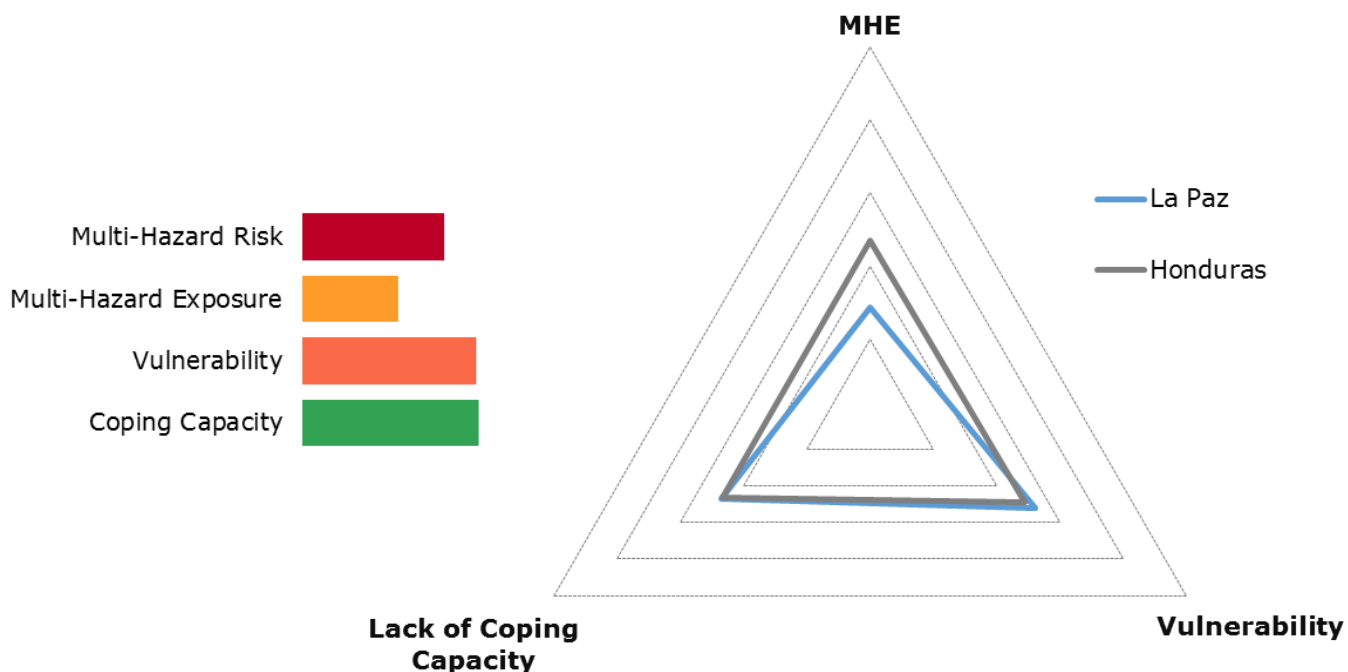


Figure 56. Department multi-hazard risk component scores compared to overall average country scores.

⁶ **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 socio-economic conditions.

⁷ **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 environmental stress

Ranked 12 of 18 departments, low environmental stress indicates that natural resources and agriculture will be more resilient to the effects of a disaster and may recover faster.



High environmental capacity

Ranked 5 of 18 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

Provide business opportunities and education

Institute programs to provide independent economic opportunities in the department. Increased economic capacity will decrease vulnerability in emergencies.

02

Provide opportunities for women

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



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Lempira

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

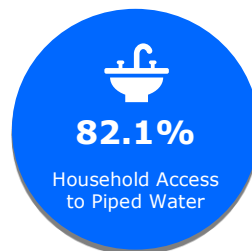
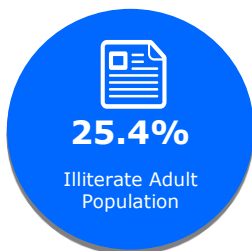
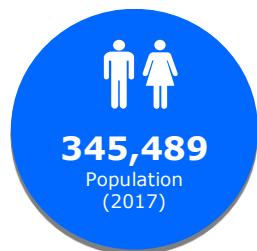
Department: Lempira



Department Capital: Gracias

Area: 4,228 km²

Lempira shares its southern border with El Salvador. Cerro Las Minas, the highest mountain in Honduras, is located within the department. With its rugged terrain, parts of Lempira are relatively isolated. Lempira has the highest rate of adult illiteracy in the country.



Municipality	Population
Belén	7,720
Candelaria	6,931
Cololaca	9,715
Erandique	16,009
Gracias	53,018
Gualcince	11,826
Guarita	8,646
La Campa	7,408
La Iguala	28,219
La Unión	13,791
La Virtud	6,682
Las Flores	10,172
Lepaera	39,004
Mapulaca	4,360
Piraera	14,485
San Andrés	14,028
San Francisco	9,260
San Manuel Colohete	15,123
San Marcos de Corquin	6,076
San Rafael	14,109
San Sebastián	11,279
Santa Cruz	7,429
Talgua	11,071
Tomalá	6,652
Valladolid	3,802

**Multi-Hazard Risk Rank:
Moderate (8 of 18)**

**Lack of Resilience Rank:
Very High (2 of 18)**



RVA Component Scores

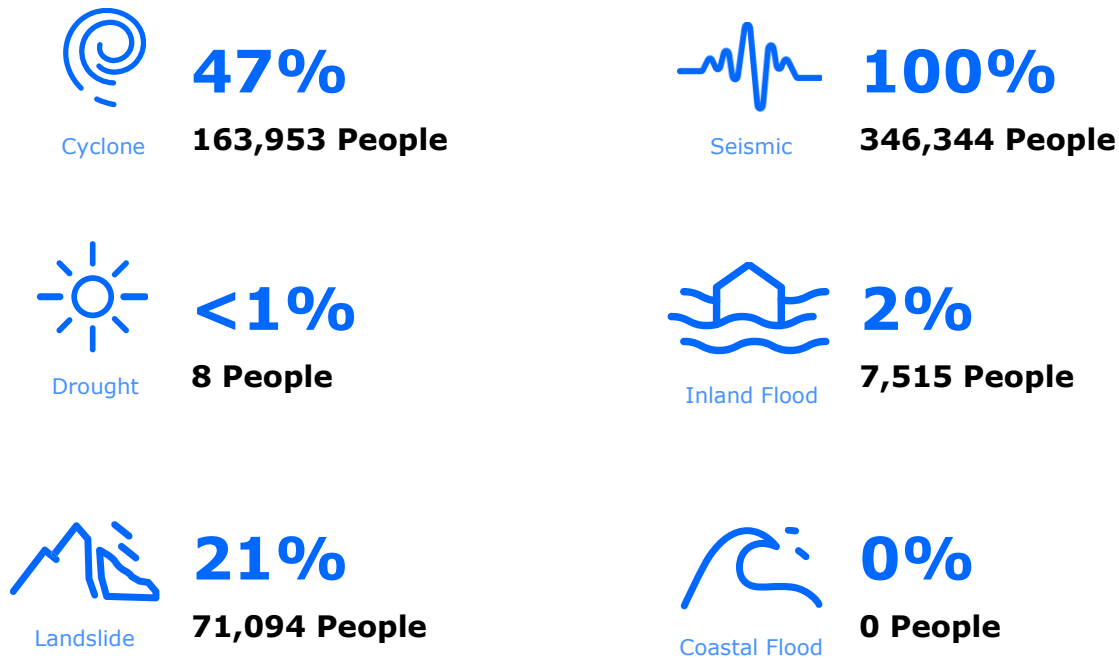
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Moderate		Very High		Low		Very High		Very Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.499	8	0.586	2	0.325	14	0.631	2	0.460	17

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 14 of 18 Departments (Score: 0.325)

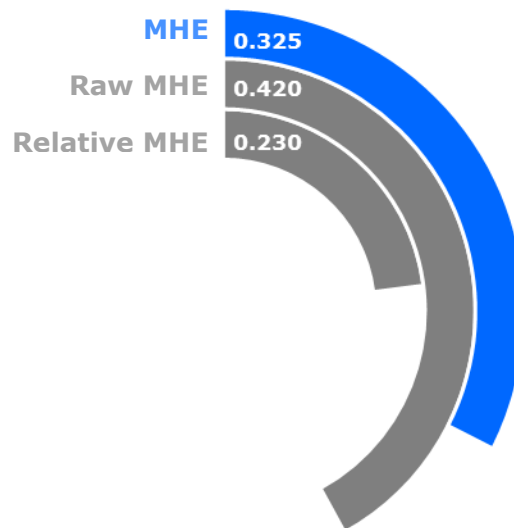
Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Assistance for the Dry Corridor

In 2017, USAID Office of Food for Peace (FFP) supported the UN World Food Program (WFP) to provide cash-for-assets activities reaching approximately 7,600 vulnerable, drought-affected households in Lempira Department. In exchange for participating in asset creation activities—including efforts to improve the productivity of agricultural land, construction of hygiene infrastructure, rehabilitation of family gardens and agroforestry projects—households receive cash transfers for food. This assistance allows families to purchase nutritious foods, while supporting local markets and agricultural producers whenever possible, reducing drought susceptibility.

USAID Food Assistance Fact Sheet, Honduras, 25 SEP 2017



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: 2 of 18 Departments (Score: 0.631) Vulnerability in Lempira is strongly influenced by Information Access Vulnerability, Economic Constraints, Gender Inequality, Clean Water Vulnerability, and Population Pressures. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

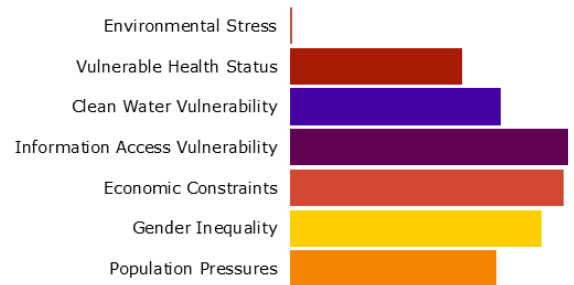









Table 3. Component scores for each vulnerability subcomponent

	Environmental Stress	0.4% Forest Loss Due to Pine Beetle Plague	<0.1% Water Shortage Area					
	Vulnerable Health Status	19.0 Infant Mortality Rate	85.8 Maternal Mortality Ratio	73.7 Life Expectancy (years)	2.4% Acute Malnutrition Rate	3.7% Population Disabled	0.289 Communicable Disease Sub-Index ⁴	0.284 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	82.1% Households Access to Piped Water	36.1% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	25.4% Adult Illiteracy	5.0 Average Years of Schooling	88.9% Enrollment in Basic Education	98.7% Households without Internet	69.1% Households without TV	40.2% Households without Radio	
	Economic Constraints	0.83 Economic Dependency Ratio	73.6% Population in Poverty	0.40 GINI Coefficient				
	Gender Inequality	0.29 Ratio of Female to Male Land Ownership Rate	0.83 Ratio of Female to Male Home Ownership Rate	0.12 Ratio of Female to Male Economic Activity	1.06 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	2.4% Average Annual Population Change	10.5% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 17 of 18 Departments (Score: 0.460) Lempira exhibits weaker Coping Capacity in the areas of Economic Capacity, Environmental Capacity, and Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

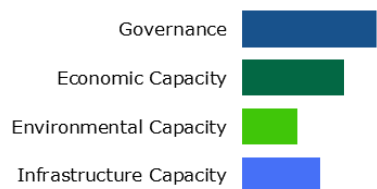









Table 4. Component scores for each coping capacity subcomponent

	Governance	54.6 Homicides per 100k Persons	94.6 Sexual Violence and Assault per 100k Persons	7.0% Households with Public Garbage Collection	78.9% Voter Participation (2013 Election)	
	Economic Capacity	33.6% Economic Activity Rate	99.2% Employment Rate	2.5% Population in Highest Wealth Quintile		
	Environmental Capacity	12.8% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.1 Hospital Beds per 10,000 Persons	1.8 Physicians per 10,000 Persons	7.1 Nurses per 10,000 Persons	25.9 km Average Distance to Nearest Hospital	90.9% Children Completed Immunization Schedule
	Communications Capacity	3.2% Households with Access to Fixed Phone Line	46.1% Households with Access to Mobile Phone			
	Transportation Capacity	31.6 km Average Distance to Nearest Port or Airport	15.3 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 2 of 18 Departments (Score: 0.586)

Lempira's Lack of Resilience score and ranking are due to very high Vulnerability combined with very low Coping Capacity scores.

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



**Information
Access
Vulnerability**



**Economic
Constraints**



Gender Inequality

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 8 of 18 Departments (Score: 0.499)

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

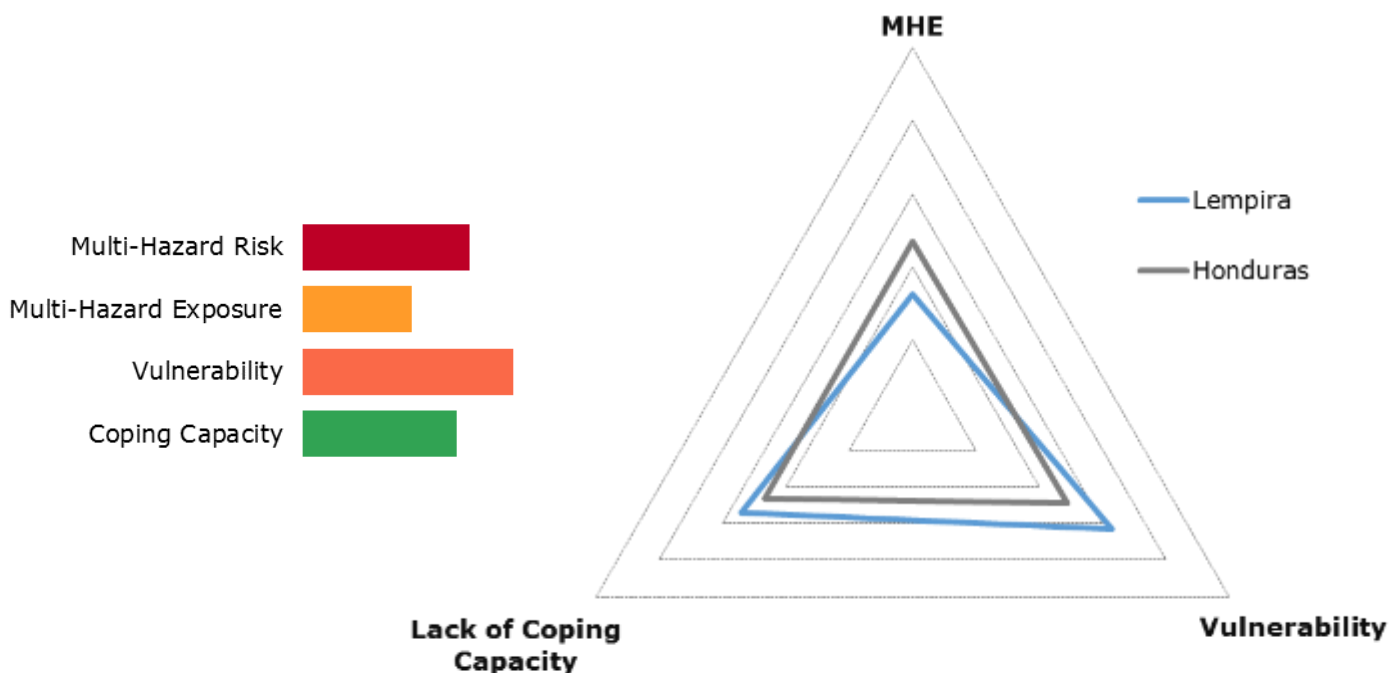


Figure 57. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 environmental stress

Ranked 14 of 18 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 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.

02

Provide business opportunities and education

Institute programs to provide independent economic opportunities in the department. Increased economic capacity will decrease vulnerability in emergencies.

03

Provide opportunities for women

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



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Ocotepeque

**Honduras National Disaster Preparedness Baseline Assessment
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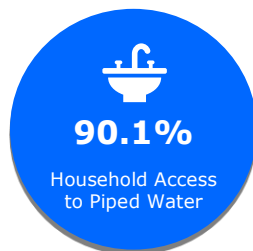
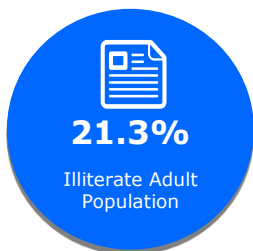
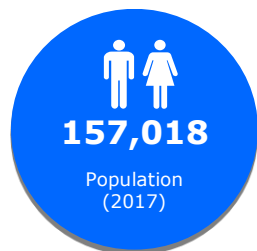
Department: Ocotepeque



Department Capital: Nueva Ocotepeque

Area: 1,630 km²

Ocotepeque is the westernmost department in Honduras, bordering both Guatemala and El Salvador. While the main economic activities are agricultural – including coffee, corn, cabbage, sugar cane, and onion – Ocotepeque has the economic benefit of being a tri-country center of business.



Municipality	Population
Belén Gualcho	16,568
Concepción	5,439
Dolores Merendón	4,287
Fraternidad	6,111
La Encarnación	5,330
La Labor	10,188
Lucerna	6,157
Mercedes	7,491
Ocotepeque	24,770
San Fernando	7,184
San Francisco del Valle	10,051
San Jorge	5,336
San Marcos	21,448
Santa Fe	5,174
Sensenti	11,881
Sinuapa	9,601



**Multi-Hazard Risk Rank:
Very Low (18 of 18)**

**Lack of Resilience Rank:
Low (14 of 18)**

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		Low		Very Low		Moderate		Very High	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.303	18	0.429	14	0.051	18	0.541	8	0.682	2

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 18 of 18 Departments (Score: 0.051)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Emigration and Food Insecurity

Ocatepeque Department, the northernmost department within the Dry Corridor, has seen excessive drought over the last two years, as have other departments in Honduras and areas of El Salvador and Guatemala. According to an interagency study entitled *Food Security and Emigration*, released in August 2017, food insecurity caused by the drought is causing emigration north to the United States. The study showed that younger and more vulnerable populations are emigrating, and if the emigration fails, families are left scrambling to feed the additional household members. The emigration causes further poverty in the area as the family members left behind are forced to take on the debt and workload of those leaving.

The study was funded and jointly produced by WFP, the International Fund for Agricultural Development (IFAD) and the Inter-American Development Bank (IDB) with the collaboration of the International Organization for Migration (IOM) and the Organization of American States (OAS).



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: 8 of 18 Departments (Score: 0.541)

Vulnerability in Ocotepeque is strongly influenced by Gender Inequality, Population Pressures, and Information Access Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

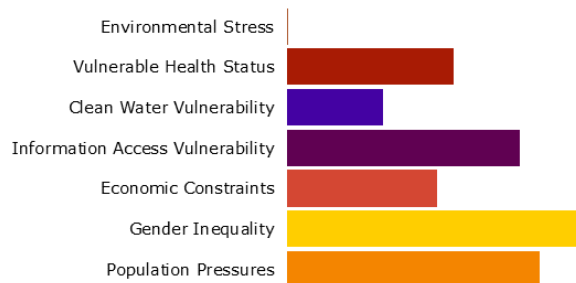









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	0.2% Forest Loss Due to Pine Beetle Plague	0.0% Water Shortage Area					
	Vulnerable Health Status	18.6 Infant Mortality Rate	67.5 Maternal Mortality Ratio	75.3 Life Expectancy (years)	2.7% Acute Malnutrition Rate	3.4% Population Disabled	0.464 Communicable Disease Sub-Index ⁴	0.572 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	90.1% Households Access to Piped Water	62.6% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	21.3% Adult Illiteracy	5.6 Average Years of Schooling	88.5% Enrollment in Basic Education	95.6% Households without Internet	40.7% Households without TV	42.8% Households without Radio	
	Economic Constraints	0.70 Economic Dependency Ratio	53.8% Population in Poverty	0.33 GINI Coefficient				
	Gender Inequality	0.33 Ratio of Female to Male Land Ownership Rate	0.77 Ratio of Female to Male Home Ownership Rate	0.19 Ratio of Female to Male Economic Activity	1.13 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	3.0% Average Annual Population Change	11.1% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 2 of 18 Departments (Score: 0.682)

Despite having relatively high Coping Capacity overall, Ocotepeque exhibits moderate weaknesses in the thematic areas of Environmental Capacity and Communications Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

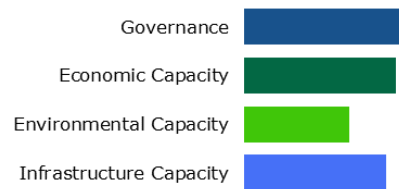









Table 4. Component scores for each coping capacity subcomponent.

	Governance	50.8 Homicides per 100k Persons	108.2 Sexual Violence and Assault per 100k Persons	26.2% Households with Public Garbage Collection	77.0% Voter Participation (2013 Election)	
	Economic Capacity	38.8% Economic Activity Rate	99.0% Employment Rate	9.4% Population in Highest Wealth Quintile		
	Environmental Capacity	23.5% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	5.3 Hospital Beds per 10,000 Persons	3.4 Physicians per 10,000 Persons	13.2 Nurses per 10,000 Persons	20.0 km Average Distance to Nearest Hospital	91.8% Children Completed Immunization Schedule
	Communications Capacity	10.2% Households with Access to Fixed Phone Line	63.9% Households with Access to Mobile Phone			
	Transportation Capacity	16.7 km Average Distance to Nearest Port or Airport	25.3 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 14 of 18 Departments (Score: 0.429)

Ocotepeque's Lack of Resilience score and ranking are due to moderate Vulnerability combined with very high Coping Capacity scores.

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



Gender Inequality



Population Pressures



Information Access Vulnerability

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 18 of 18 Departments (Score: 0.303)

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

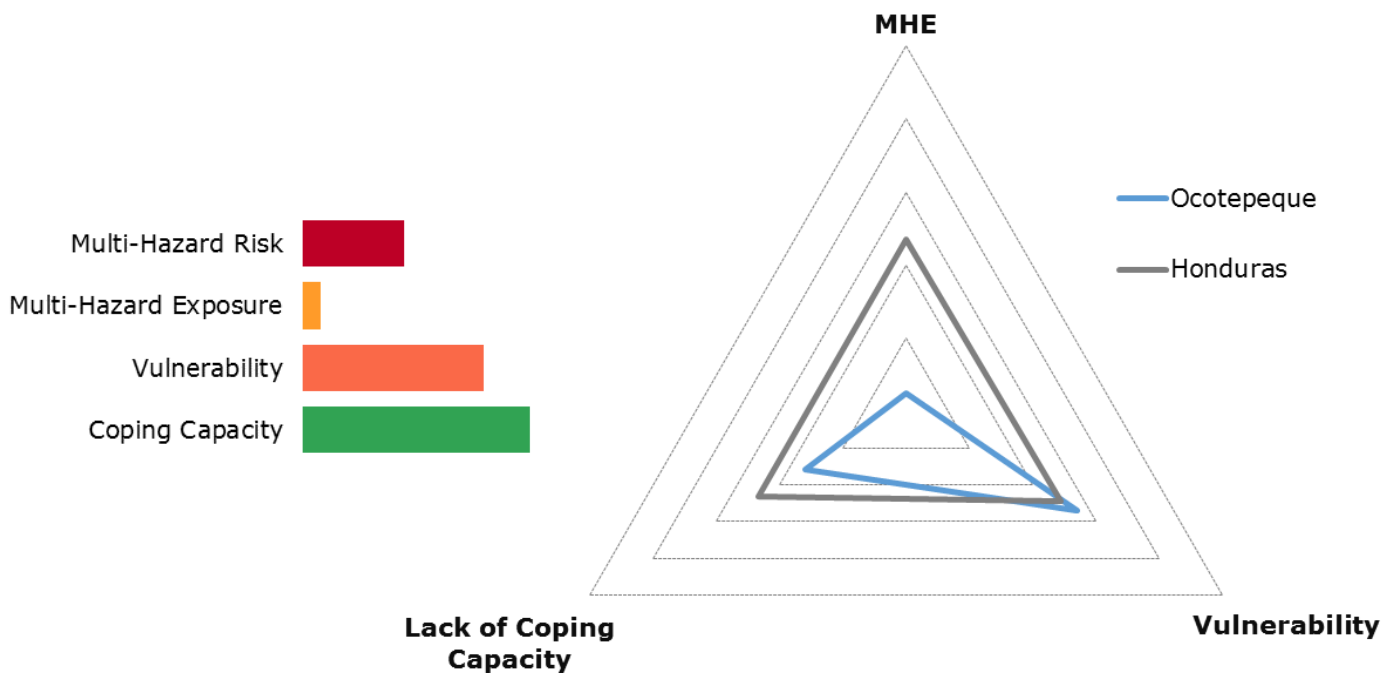


Figure 58. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 transportation capacity

Ranked 3 of 18 departments, well-developed transportation networks facilitate the movement of goods and services, decreasing wait times for response and relief supplies.



Highest overall governance

Ranked 1 of 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.



Low environmental stress

Ranked 15 of 18 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

Provide opportunities for women

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

02

Monitor and manage population influx

Invest in a program to manage population influx into the region. Ocotepeque'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

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.

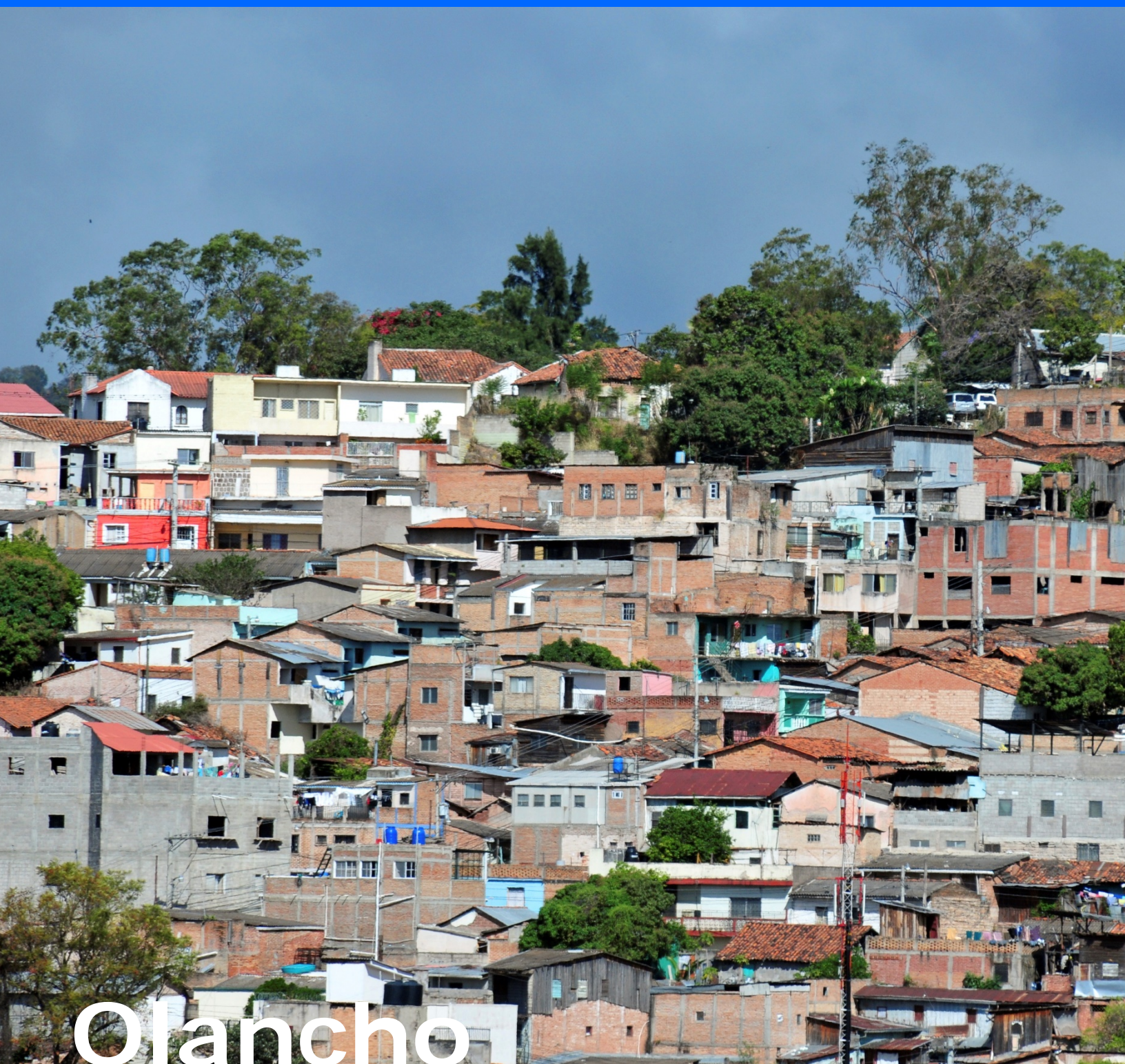


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Olancho

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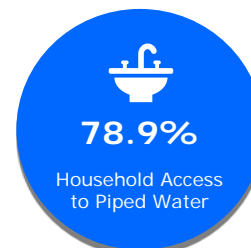
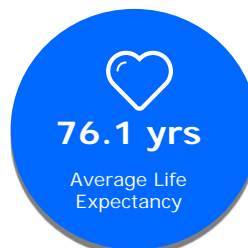
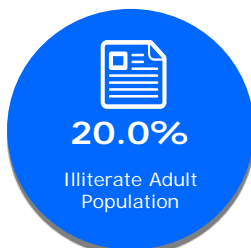
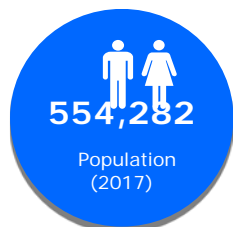
Department: Olancho



Department Capital: Juticalpa

Area: 23,905 km²

Olancho, largest of the 18 departments, is located in eastern Honduras, north of El Paraíso. The department is regarded as having a wealth of natural resources with rich biodiversity. The economy is based primarily in agriculture with extensive farming, cattle ranching, and timber extraction. The Guayape River in Olancho is known for its gold deposits.



Municipality	Population
Campamento	21,814
Catacamas	126,982
Concordia	8,498
Dulce Nombre de Culmí	31,118
Esquipulas del Norte	11,496
Gualaco	22,769
Guarizama	7,942
Guata	12,385
Guayape	13,152
Jano	5,083
Juticalpa	135,076
La Unión	8,038
Mangulile	9,495
Manto	11,748
Patuca	27,671
Salamá	7,859
San Esteban	26,781
San Francisco de Becerra	10,318
San Francisco de La Paz	20,183
Santa María del Real	10,875
Silca	8,135
Yocón	12,566



**Multi-Hazard Risk Rank:
High (6 of 18)**

**Lack of Resilience Rank:
High (4 of 18)**

RVA Component Scores

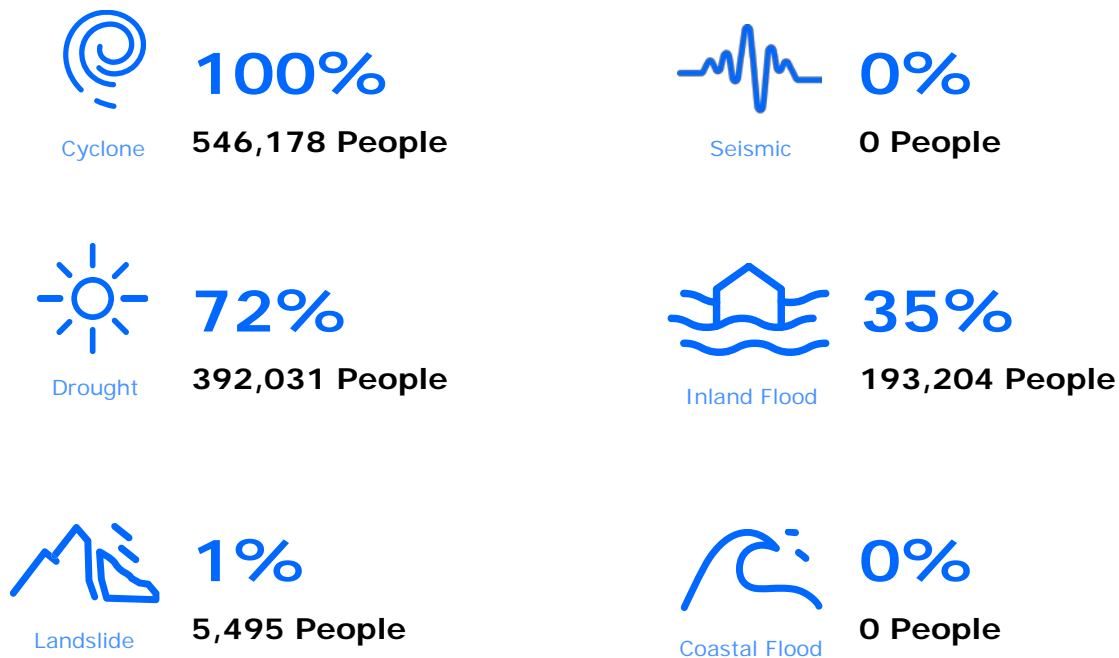
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
High		High		Moderate		High		Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.534	6	0.541	4	0.520	7	0.594	4	0.513	11

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 7 of 18 Departments (Score: 0.520)

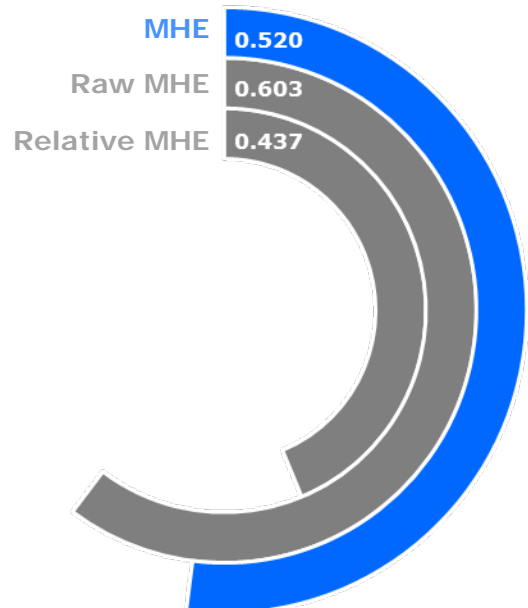
Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Olancho Aid Foundation Inc.

The Olancho Aid Foundation Inc. is a nonprofit, faith-based organization that empowers Honduran youth to transform themselves, their communities, and their country through education.

Each year Mission Teams travel to Olancho from several different states in the U.S. Some teams consist of small groups of 4-5 people, and others are groups of 30+ people. Each team comes to help the underserved community in Juticalpa, Olancho, Honduras. Teams host medical clinics, complete construction projects, paint and make repairs, and distribute clothing to the poor in remote villages. Integration of disaster-risk information into the foundation could increase the resilience of the population.



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: 4 of 18 Departments (Score: 0.594) Vulnerability in Olancho is strongly influenced by Economic Constraints, Environmental Stress, Information Access Vulnerability, and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

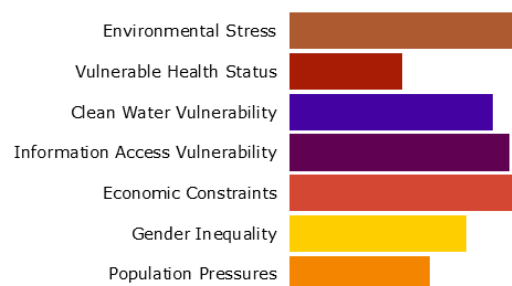









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	39.0% Forest Loss Due to Pine Beetle Plague	29.4% Water Shortage Area						
	Vulnerable Health Status	17.6 Infant Mortality Rate	188.1 Maternal Mortality Ratio	76.1 Life Expectancy (years)	0.7% Acute Malnutrition Rate	2.1% Population Disabled	0.440 Communicable Disease Sub-Index ⁴	0.192 Non-Communicable Disease Sub-Index ⁴	
	Clean Water Vulnerability	78.9% Households Access to Piped Water	53.2% Households Connected to Sewer or Septic System						
	Information Access Vulnerability	20.0% Adult Illiteracy	5.9 Average Years of Schooling	87.1% Enrollment in Basic Education	96.4% Households without Internet	50.5% Households without TV	35.0% Households without Radio		
	Economic Constraints	0.77 Economic Dependency Ratio	63.2% Population in Poverty	0.41 GINI Coefficient					
	Gender Inequality	0.55 Ratio of Female to Male Land Ownership Rate	1.02 Ratio of Female to Male Home Ownership Rate	0.20 Ratio of Female to Male Economic Activity	1.12 Ratio of Female to Male Secondary Enrollment				
	Population Pressures	2.0% Average Annual Population Change	6.7% Average Annual Urban Population Change						

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 11 of 18 Departments (Score: 0.513) Olancho exhibits weaker Coping Capacity in the areas of Economic Capacity and Infrastructure (especially Health Care and Transportation). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

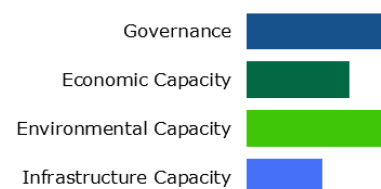


Table 4. Component scores for each coping capacity subcomponent.

	Governance	36.3 Homicides per 100k Persons	94.5 Sexual Violence and Assault per 100k Persons	18.3% Households with Public Garbage Collection	69.1% Voter Participation (2013 Election)	
	Economic Capacity	33.3% Economic Activity Rate	98.5% Employment Rate	9.3% Population in Highest Wealth Quintile		
	Environmental Capacity	34.4% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	3.2 Hospital Beds per 10,000 Persons	1.8 Physicians per 10,000 Persons	7.0 Nurses per 10,000 Persons	50.2 km Average Distance to Nearest Hospital	84.8% Children Completed Immunization Schedule
	Communications Capacity	13.6% Households with Access to Fixed Phone Line	59.0% Households with Access to Mobile Phone			
	Transportation Capacity	52.2 km Average Distance to Nearest Port or Airport	7.8 km Total Length of Road per km ² (area)			

⁵ **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 Resilience⁶ Rank: 4 of 18 Departments (Score: 0.541)

Olancho's Lack of Resilience score and ranking are due to high Vulnerability combined with low Coping Capacity scores.

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



Economic Constraints



Environmental Stress



Information Access Vulnerability

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 6 of 18 Departments (Score: 0.534)

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

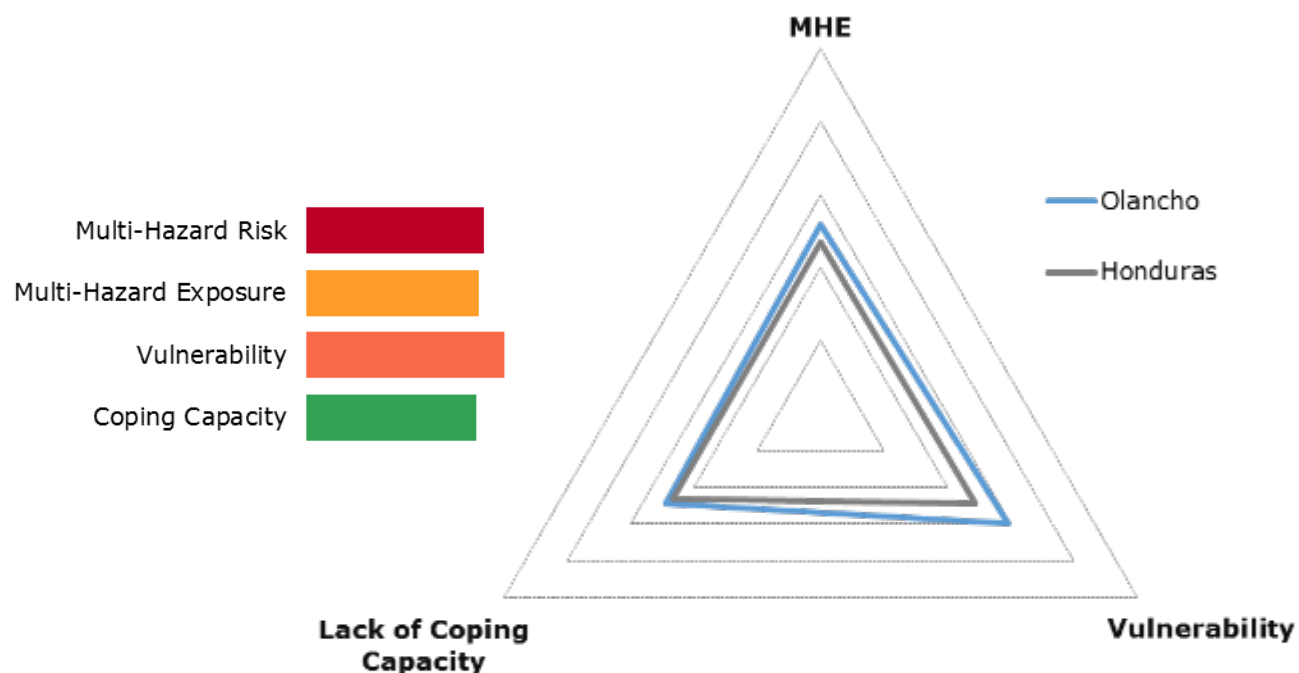


Figure 59. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 18 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



Low population pressures

Ranked 12 of 18 departments, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.



High overall governance

Ranked 5 of 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.

Recommendations

01

Increased economic opportunity

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

02

Promote environmental programs

Invest in environmental protection programs to preserve land and vegetation, increasing resiliency and coping capacity.

03

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.



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Santa Bárbara

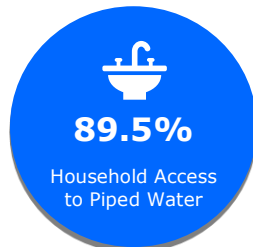
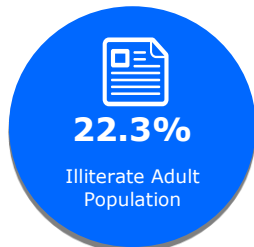
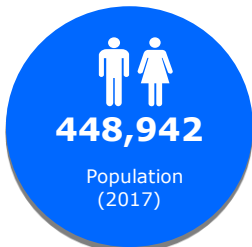
**Honduras National Disaster Preparedness Baseline Assessment
Department Profile**

Department: Santa Bárbara

Department Capital: Santa Bárbara

Area: 5,024 km²

Santa Bárbara is located between Copán and Cortés, sharing a border with Guatemala. The department features climatic conditions ideal for growing coffee, the main staple crop. Local economies also thrive on the sale of handicrafts made from reed of palm. El Mochito mine produces zinc, lead, and silver.



Municipality	Population
Arada	10,433
Atima	19,132
Azacualpa	22,240
Ceguaca	5,353
Chinda	4,947
Concepción del Norte	9,405
Concepción del Sur	5,517
El Nispero	8,745
Gualala	5,416
Ilama	9,160
Las Vegas	25,075
Macuelizo	36,607
Naranjito	12,637
Nueva Frontera	13,245
Nuevo Celilac	8,185
Pettoa	12,617
Protección	17,220
Quimistán	54,638
San Francisco de Ojuera	7,595
San José de Colinas	19,407
San Luis	25,166
San Marcos	15,857
San Nicolás	15,360
San Pedro Zacapa	10,868
San Vicente Centenario	3,629
Santa Bárbara	45,002
Santa Rita	4,036
Trinidad	20,307



Multi-Hazard Risk Rank: High (5 of 18)

Lack of Resilience Rank: High (6 of 18)

RVA Component Scores

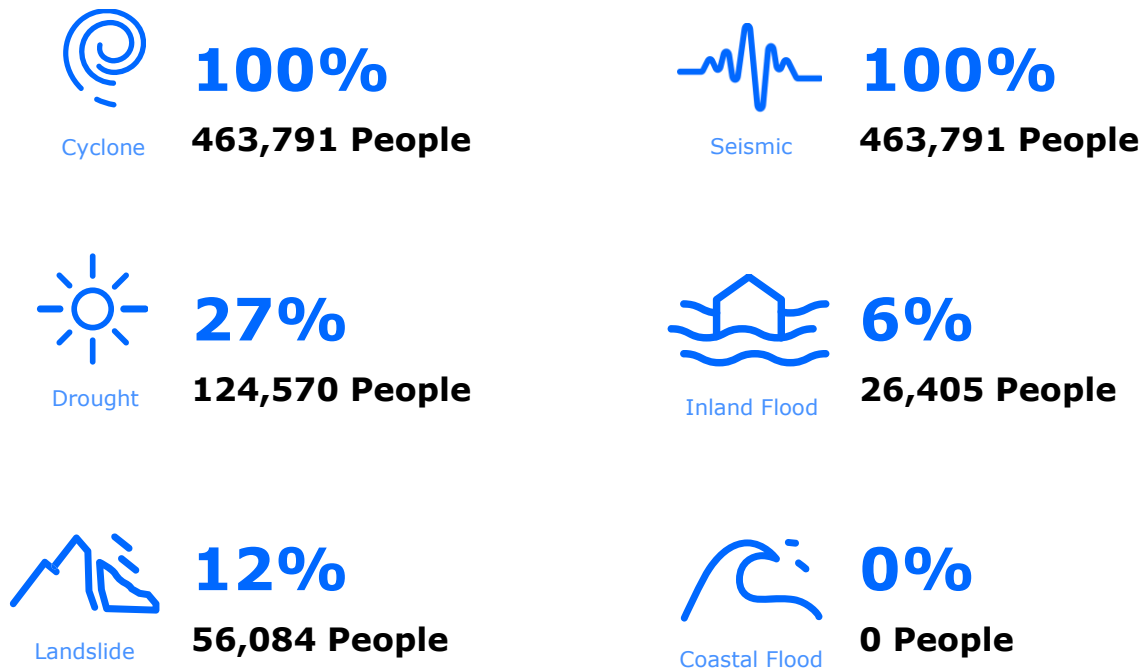
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
High		High		High		Low		Very Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.545	5	0.508	6	0.619	5	0.482	11	0.465	15

Multi-Hazard Exposure (MHE)

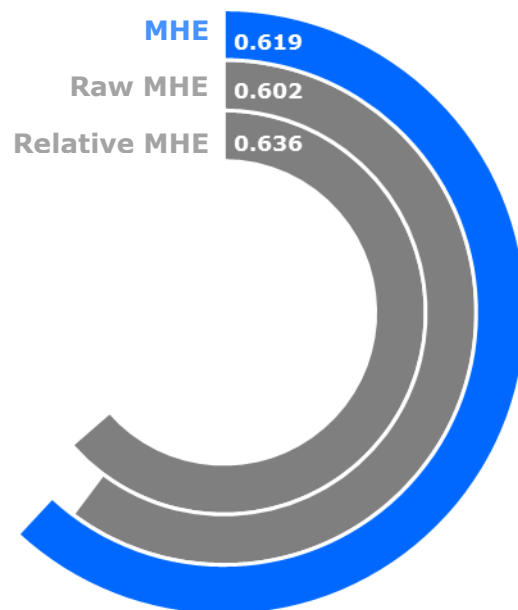
Multi-Hazard Exposure¹ Rank: 5 of 18 Departments (Score: 0.619)

Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Unitarian Universalist Service Committee (UUSC)

UUSC is conducting a project in Santa Bárbara designed to “promote awareness, protection, and access to justice for Honduran women who face insecurity from gender-based violence.” This program, started June 2017, may help to reduce the high gender inequality present throughout the department.



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: 11 of 18 Departments (Score: 0.482) Vulnerability in Santa Bárbara is influenced by Information Access Vulnerability and Gender Inequality. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

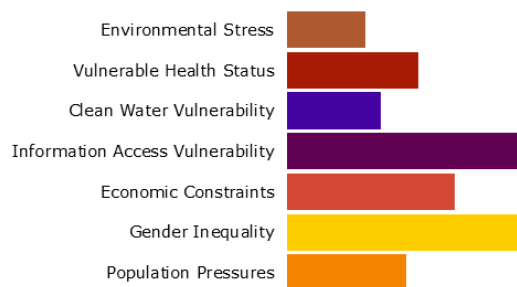









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	7.7% Forest Loss Due to Pine Beetle Plague	19.0% Water Shortage Area					
	Vulnerable Health Status	18.5 Infant Mortality Rate	140.1 Maternal Mortality Ratio	76.3 Life Expectancy (years)	1.2% Acute Malnutrition Rate	3.4% Population Disabled	0.280 Communicable Disease Sub-Index ⁴	0.259 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	89.5% Households Access to Piped Water	66.3% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	22.3% Adult Illiteracy	5.7 Average Years of Schooling	89.7% Enrollment in Basic Education	96.6% Households without Internet	47.1% Households without TV	42.6% Households without Radio	
	Economic Constraints	0.73 Economic Dependency Ratio	55.0% Population in Poverty	0.34 GINI Coefficient				
	Gender Inequality	0.35 Ratio of Female to Male Land Ownership Rate	0.85 Ratio of Female to Male Home Ownership Rate	0.19 Ratio of Female to Male Economic Activity	1.08 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	1.9% Average Annual Population Change	5.7% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 15 of 18 Departments (Score: 0.465) Santa Bárbara exhibits weaker Coping Capacity in the areas of Environmental Capacity and Infrastructure (especially Health Care and Communications). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

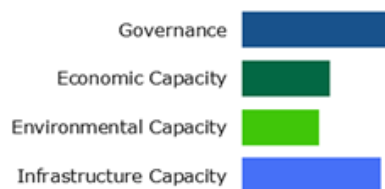









Table 4. Component scores for each coping capacity subcomponent.

	Governance	63.2 Homicides per 100k Persons	118.2 Sexual Violence and Assault per 100k Persons	15.1% Households with Public Garbage Collection	78.9% Voter Participation (2013 Election)	
	Economic Capacity	34.6% Economic Activity Rate	98.5% Employment Rate	8.7% Population in Highest Wealth Quintile		
	Environmental Capacity	6.4% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	2.2 Hospital Beds per 10,000 Persons	1.4 Physicians per 10,000 Persons	4.9 Nurses per 10,000 Persons	30.5 km Average Distance to Nearest Hospital	87.5% Children Completed Immunization Schedule
	Communications Capacity	7.5% Households with Access to Fixed Phone Line	54.0% Households with Access to Mobile Phone			
	Transportation Capacity	47.4 km Average Distance to Nearest Port or Airport	25.4 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 6 of 18 Departments (Score: 0.508)

Santa Bárbara's Lack of Resilience score and ranking are due to low Vulnerability combined with very low Coping Capacity scores.

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



Environmental Stress



Environmental Capacity



Infrastructure

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 5 of 18 Departments (Score: 0.545)

Santa Bárbara's Multi-Hazard Risk score and ranking are due to high Multi-Hazard Exposure combined with low Vulnerability and very low Coping Capacity scores.

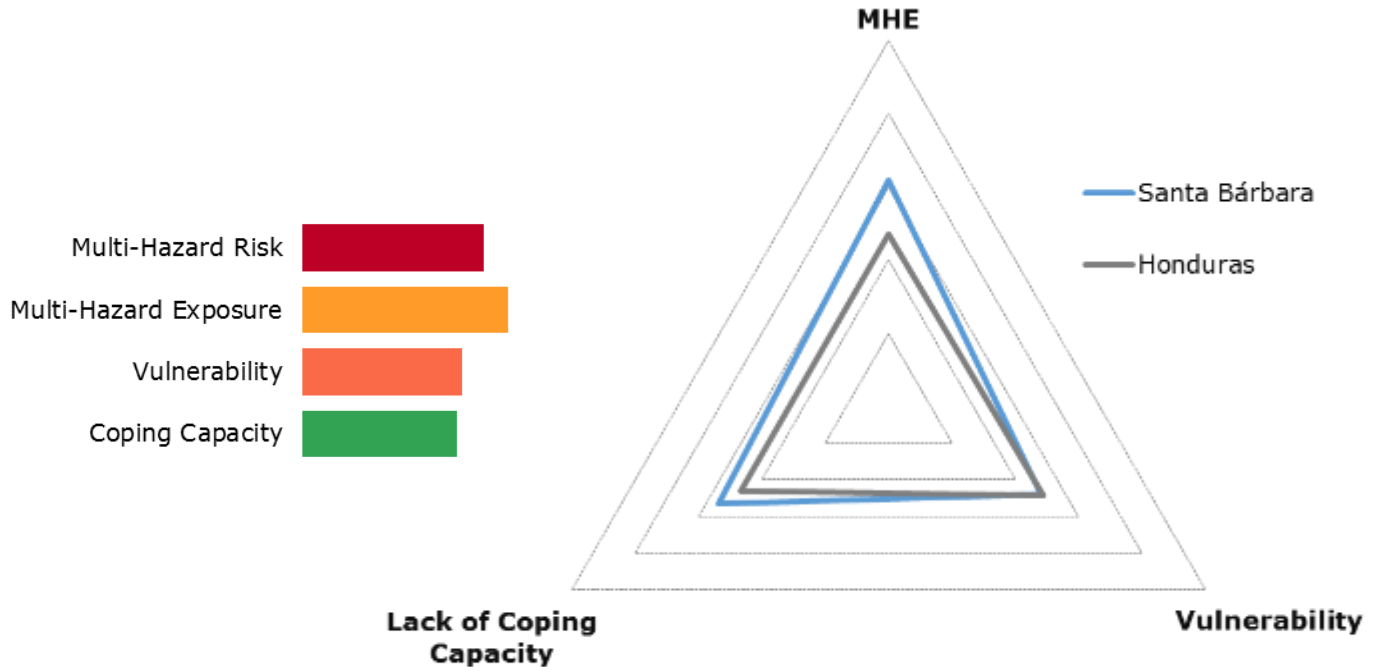


Figure 60. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 15 of 18 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



High overall governance

Ranked 7 of 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.

Recommendations

01

Increase environmental programs

While environmental programs are not weighted heavily in the analysis, an increased emphasis on land preservation, reforestation, and drought-resistant farming can decrease vulnerability and increase coping capacity.

02

Invest in infrastructure

Invest in Health Care, Transportation, and Communication Infrastructures to increase coping capacity and resiliency within the department.



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Valle

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

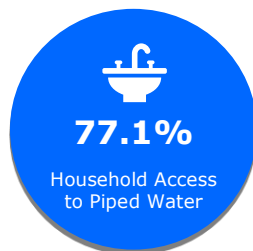
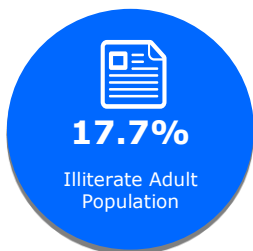
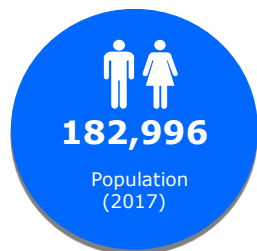
Department: Valle



Department Capital: Nacaome

Area: 1,665 km²

Valle is located in south Honduras, west of Choluteca, sharing a border with the Gulf of Fonseca to the south and El Salvador to the west. Climate in the department tends to be very hot and dry. Over half of the department resides in a water-shortage area. Economic activity in Valle is based on agriculture, shrimp farming, and salt mining.



Municipality	Population
Alianza	7,562
Amapala	13,302
Aramecina	7,460
Caridad	4,000
Goascorán	14,489
Langue	21,387
Nacaome	59,970
San Francisco de Coray	9,910
San Lorenzo	44,917



**Multi-Hazard Risk Rank:
Moderate (10 of 18)**

**Lack of Resilience Rank:
Low (11 of 18)**

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		Low		Moderate		Moderate		Moderate	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.485	10	0.490	11	0.473	8	0.537	9	0.557	8

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 8 of 18 Departments (Score: 0.473)

Table 2. Estimated ambient population² exposed to each hazard (2014).

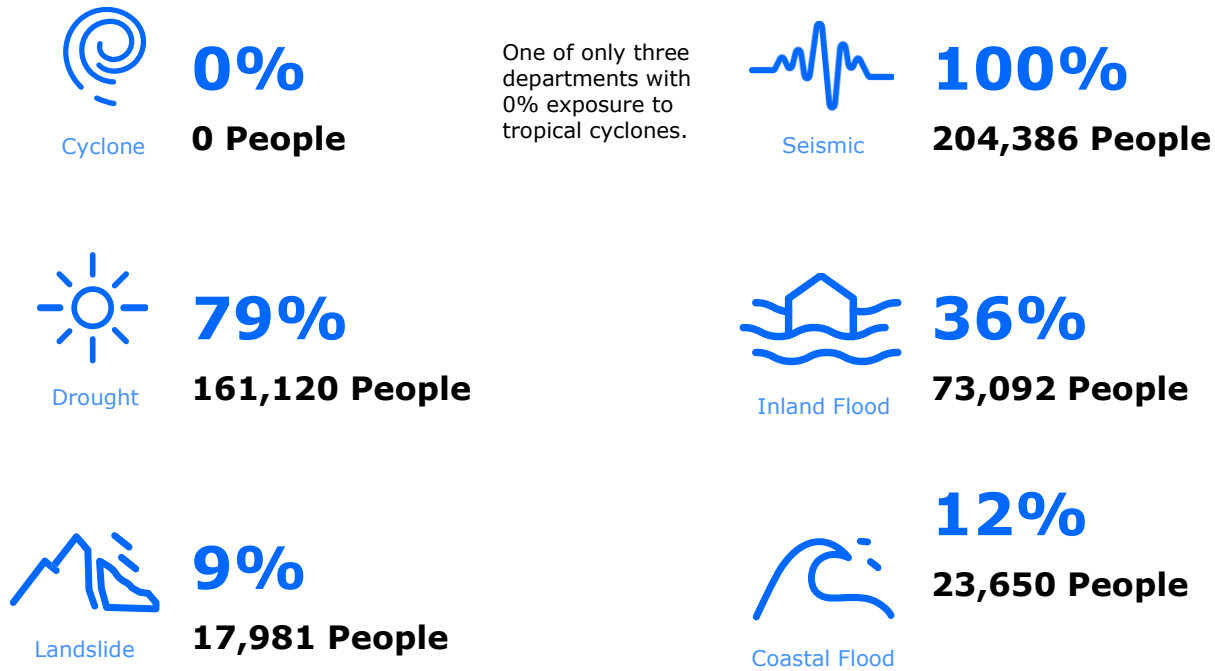
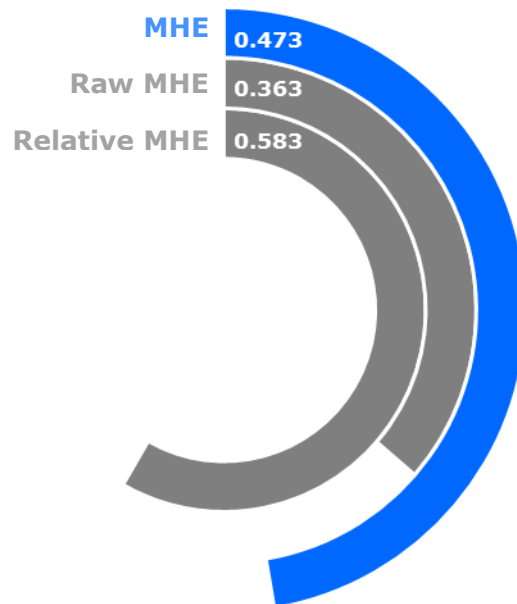


Figure 1. Valle, Honduras (image credit: Panoramio).



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: 9 of 18 Departments (Score: 0.537) Vulnerability in Valle is strongly influenced by Environmental Stress and Clean Water Vulnerability. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

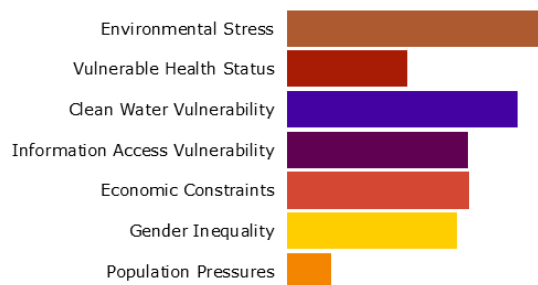









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	25.4% Forest Loss Due to Pine Beetle Plague	64.2% Water Shortage Area					
	Vulnerable Health Status	13.4 Infant Mortality Rate	123.8 Maternal Mortality Ratio	76.2 Life Expectancy (years)	1.6% Acute Malnutrition Rate	2.7% Population Disabled	0.611 Communicable Disease Sub-Index ⁴	0.408 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	77.1% Households Access to Piped Water	46.0% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	17.7% Adult Illiteracy	6.2 Average Years of Schooling	92.6% Enrollment in Basic Education	95.5% Households without Internet	40.0% Households without TV	38.0% Households without Radio	
	Economic Constraints	0.72 Economic Dependency Ratio	67.2% Population in Poverty	0.32 GINI Coefficient				
	Gender Inequality	0.65 Ratio of Female to Male Land Ownership Rate	1.11 Ratio of Female to Male Home Ownership Rate	0.24 Ratio of Female to Male Economic Activity	1.09 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	1.2% Average Annual Population Change	4.3% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 8 of 18 Departments (Score: 0.557)

Valle exhibits weaker Coping Capacity in the areas of Economic Capacity, Environmental Capacity, and Communications Infrastructure. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

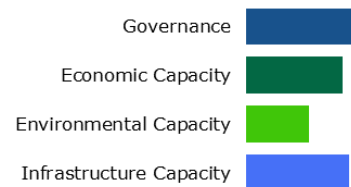









Table 4. Component scores for each coping capacity subcomponent.

	Governance	14.0 Homicides per 100k Persons	189.3 Sexual Violence and Assault per 100k Persons	11.0% Households with Public Garbage Collection	79.7% Voter Participation (2013 Election)	
	Economic Capacity	32.8% Economic Activity Rate	97.8% Employment Rate	8.6% Population in Highest Wealth Quintile		
	Environmental Capacity	17.0% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.9 Hospital Beds per 10,000 Persons	3.4 Physicians per 10,000 Persons	12.4 Nurses per 10,000 Persons	25.2 km Average Distance to Nearest Hospital	86.4% Children Completed Immunization Schedule
	Communications Capacity	12.4% Households with Access to Fixed Phone Line	58.1% Households with Access to Mobile Phone			
	Transportation Capacity	23.0 km Average Distance to Nearest Port or Airport	35.6 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 11 of 18 Departments (Score: 0.490)

Valle's Lack of Resilience score and ranking are due to moderate Vulnerability combined with moderate Coping Capacity scores.

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



Environmental Stress



Clean Water Vulnerability



Economic Capacity

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 10 of 18 Departments (Score: 0.485)

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

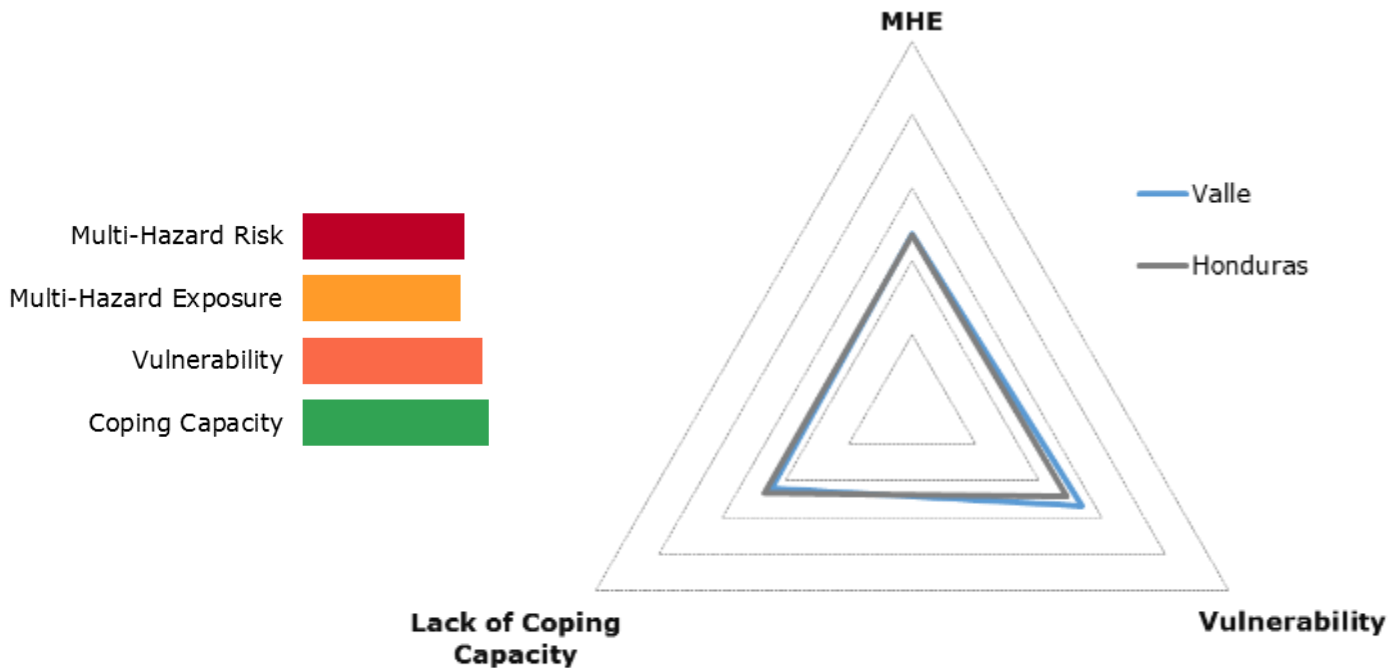


Figure 61. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 16 of 18 departments, low health vulnerability could indicate a population that will be more resilient to the negative health impacts associated with major disaster events.



High overall governance

Ranked 3 of 18 departments, high governance could facilitate the implementation of disaster-management initiatives into departmental and municipal communities.



High transportation capacity

Ranked 2 of 18 departments, well-developed transportation networks facilitate the movement of goods and services, decreasing wait times for response and relief supplies.

Recommendations

01

Increase environmental programs

Invest in programs to provide protection for the environment, including protected lands and reforestation projects, to increase the ability of the environment to recover after a disaster.

02

Increase water and sanitation services

Invest in public water and waste facilities to increase water quality and access, and reduce the spread of disease.

03

Increase economic capacity

Encourage business development and education programs to increase economic opportunities in the region.



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Yoro

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

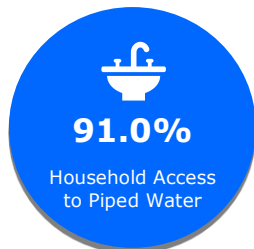
Department: Yoro



Department Capital: Yoro

Area: 7,781 km²

Yoro is located in north-central Honduras, south of Atlántida. The department contains rich agricultural lands, concentrated mainly within the Aguan River Valley to the east and the Sula Valley to the west. The capital city of Yoro is famous for the "Lluvia de Peces" (rain of fishes), a tradition by which fish "fall from the sky" during heavy summer rains.



Municipality	Population
Arenal	5,995
El Negrito	47,663
El Progreso	195,247
Jocón	9,710
Morazán	44,188
Olanchito	112,444
Santa Rita	20,841
Sulaco	18,866
Victoria	35,475
Yorito	20,926
Yoro	93,489



**Multi-Hazard Risk Rank:
Very High (2 of 18)**

**Lack of Resilience Rank:
Moderate (7 of 18)**

RVA Component Scores

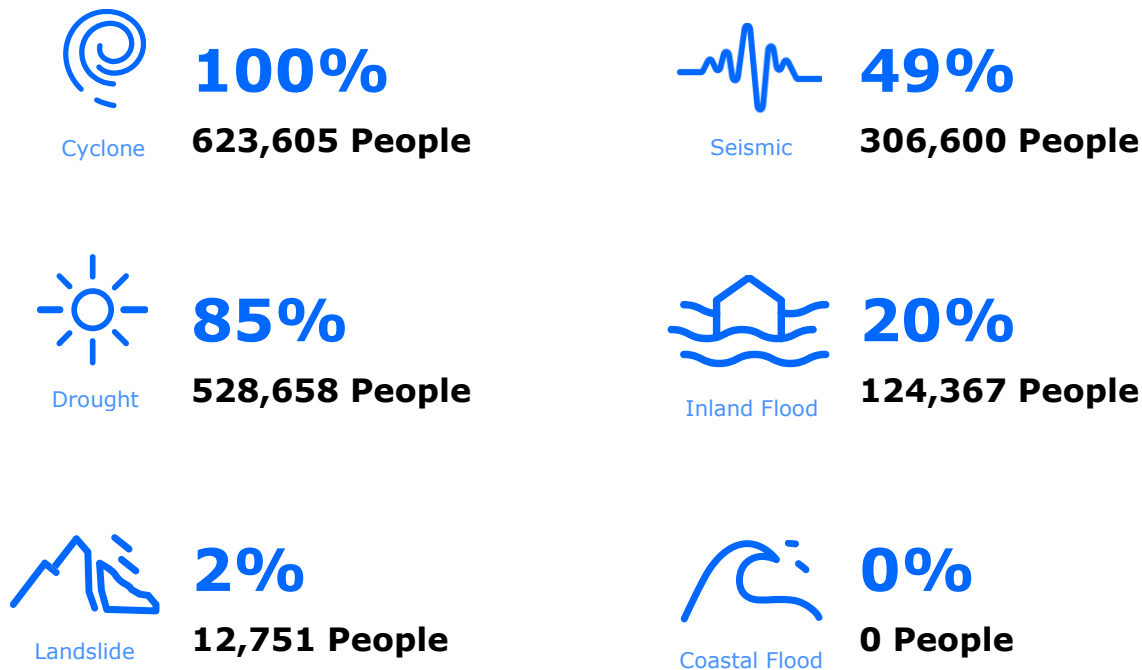
Table 1. Department scores and ranks (compared across departments) for each index.

Multi-Hazard Risk		Lack of Resilience		Multi-Hazard Exposure		Vulnerability		Coping Capacity	
Very High		High		Very High		Low		Very Low	
Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)	Score	Rank (of 18)
0.568	2	0.504	7	0.697	3	0.473	12	0.464	16

Multi-Hazard Exposure (MHE)

Multi-Hazard Exposure¹ Rank: 3 of 18 Departments (Score: 0.697)

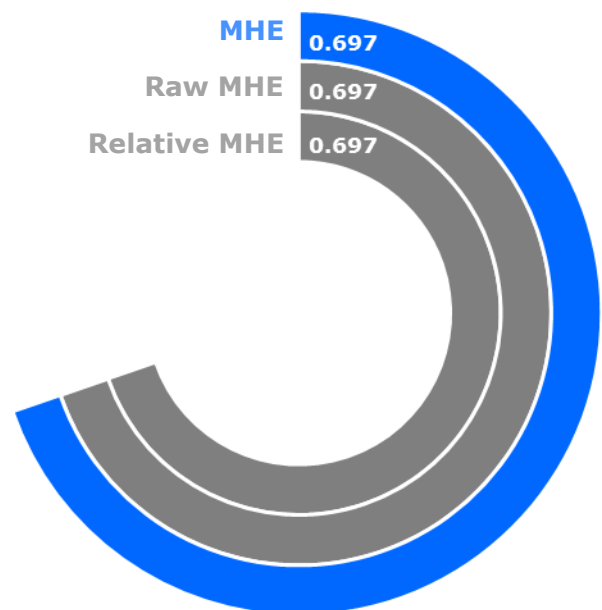
Table 2. Estimated ambient population² exposed to each hazard (2014).



Case Study: Feed the Children

Feed the Children is conducting a project in Yoro designed to “improve the food & nutrition security of mothers and children, and more specifically to reduce malnutrition.” This project could help to reduce vulnerable health in the department.

<https://www.ngoaidmap.org/projects/14187>



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: 12 of 18 Departments (Score: 0.473) Vulnerability in Yoro is influenced by Environmental Stress, Gender Inequality, Information Access Vulnerability, and Economic Constraints. The bar chart on the right indicates the socioeconomic themes contributing to the department's overall score.

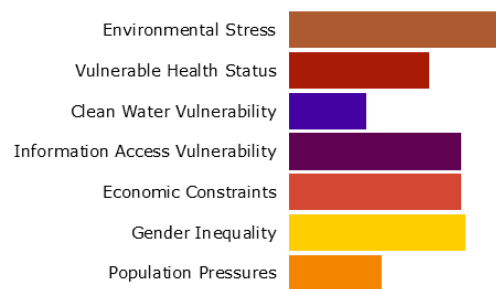









Table 3. Component scores for each vulnerability subcomponent.

	Environmental Stress	36.3% Forest Loss Due to Pine Beetle Plague	27.4% Water Shortage Area					
	Vulnerable Health Status	16.4 Infant Mortality Rate	123.5 Maternal Mortality Ratio	75.5 Life Expectancy (years)	1.9% Acute Malnutrition Rate	3.1% Population Disabled	0.412 Communicable Disease Sub-Index ⁴	0.319 Non-Communicable Disease Sub-Index ⁴
	Clean Water Vulnerability	91.0% Households Access to Piped Water	68.4% Households Connected to Sewer or Septic System					
	Information Access Vulnerability	15.1% Adult Illiteracy	6.1 Average Years of Schooling	91.4% Enrollment in Basic Education	93.9% Households without Internet	35.8% Households without TV	37.5% Households without Radio	
	Economic Constraints	0.74 Economic Dependency Ratio	54.7% Population in Poverty	0.34 GINI Coefficient				
	Gender Inequality	0.38 Ratio of Female to Male Land Ownership Rate	1.05 Ratio of Female to Male Home Ownership Rate	0.26 Ratio of Female to Male Economic Activity	1.07 Ratio of Female to Male Secondary Enrollment			
	Population Pressures	1.9% Average Annual Population Change	4.5% Average Annual Urban Population Change					

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

⁴ **Sub-indices:** A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

Coping Capacity (CC)

Coping Capacity⁵ Rank: 16 of 18 Departments (Score: 0.464)

Yoro exhibits weaker Coping Capacity in the areas of Economic Capacity, Environmental Capacity, and Infrastructure (especially Transportation and Health Care). The bar chart on the right indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.

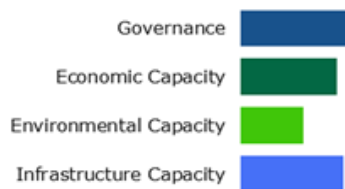









Table 4. Component scores for each coping capacity subcomponent.

	Governance	77.8 Homicides per 100k Persons	124.5 Sexual Violence and Assault per 100k Persons	27.7% Households with Public Garbage Collection	59.3% Voter Participation (2013 Election)	
	Economic Capacity	32.8% Economic Activity Rate	97.5% Employment Rate	15.7% Population in Highest Wealth Quintile		
	Environmental Capacity	14.2% Natural Protected Area				
	Infrastructure Capacity					
	Health Care Capacity	4.5 Hospital Beds per 10,000 Persons	2.2 Physicians per 10,000 Persons	6.9 Nurses per 10,000 Persons	22.9 km Average Distance to Nearest Hospital	80.9% Children Completed Immunization Schedule
	Communications Capacity	14.7% Households with Access to Fixed Phone Line	61.2% Households with Access to Mobile Phone			
	Transportation Capacity	36.3 km Average Distance to Nearest Port or Airport	10.5 km Total Length of Road per km ² (area)			

⁵ 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 Resilience⁶ Rank: 7 of 18 Departments (Score: 0.504)

Yoro's Lack of Resilience score and ranking are due to low Vulnerability combined with very low Coping Capacity scores.

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



Environmental Stress



Environmental Capacity



Gender Inequality

Multi-Hazard Risk (MHR)

Multi-Hazard Risk⁷ Rank: 2 of 18 Departments (Score: 0.568)

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

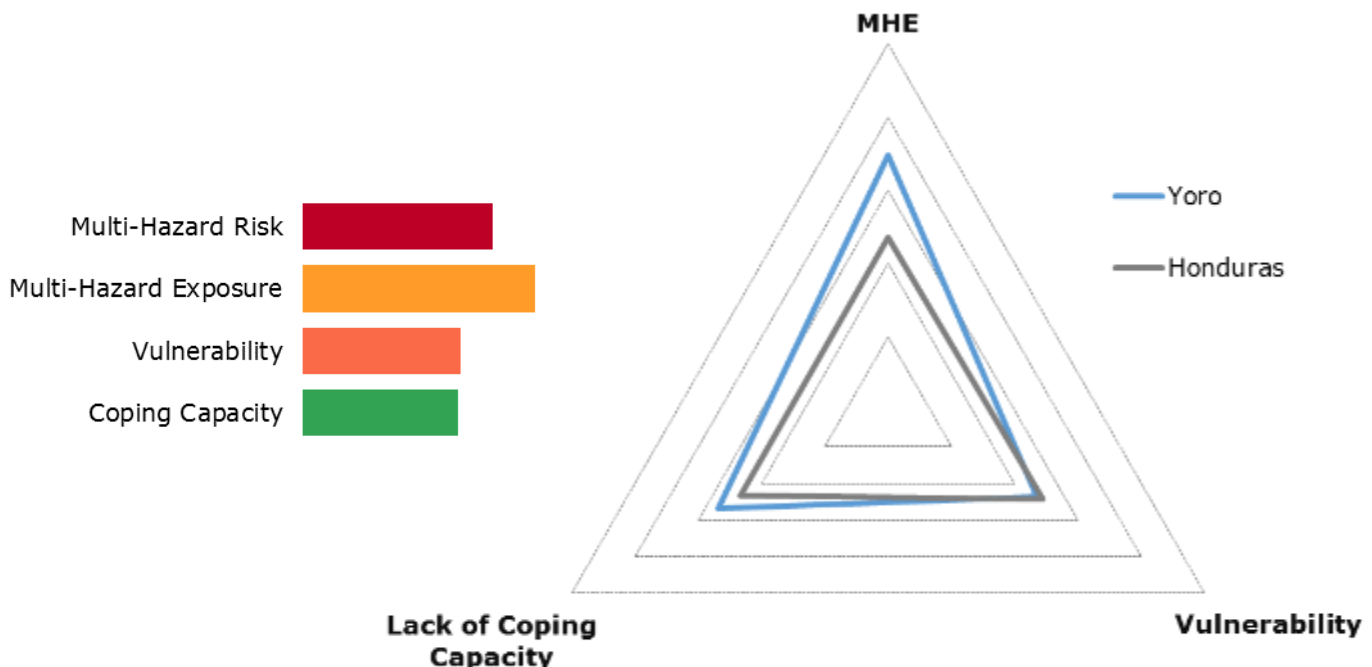


Figure 62. Department multi-hazard risk component scores compared to overall average country scores

⁶ **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 socio-economic conditions.

⁷ **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 clean water vulnerability

Ranking 14 of 18 departments, low clean water vulnerability indicates that a population has access to high water quality and good containment systems, reducing susceptibility to disaster.



Low population pressures

Ranked 15 of 18 departments, limited population change allows disaster managers to form accurate evacuation, sheltering, and resource plans.

Recommendations

01

Promote drought-resistant farming methods

A high percentage of the department is at risk of drought. Programs that promote drought-resistant crops and farming methods will decrease vulnerability to drought in the department.

02

Increase environmental programs

Invest in programs to provide protection for the environment, including protected lands and reforestation projects to increase the ability of the environment to recover after a disaster.



Better solutions. Fewer disasters. Safer world.

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