Better solutions. Fewer disasters. Safer world.





Honduras National Disaster Preparedness Baseline Assessment Department Profile

#### NDPBA Honduras Report: Department Profile

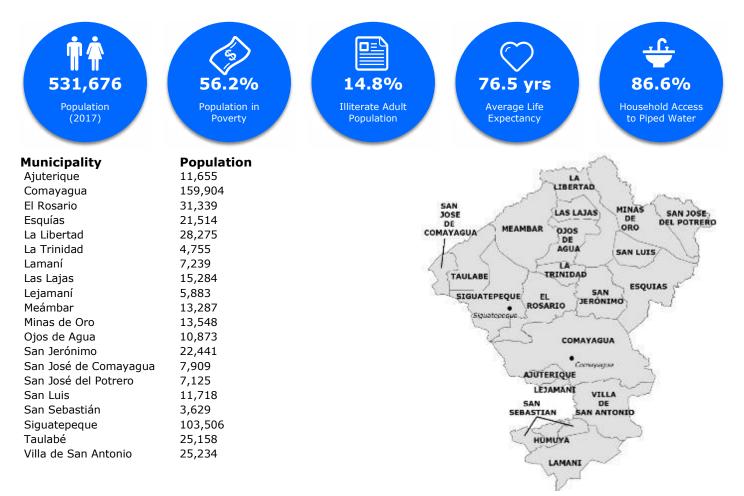
## Department: Comayagua



## Department Capital: Comayagua

Area: 5,124 km<sup>2</sup>

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.



## 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 Exposure<sup>1</sup> Rank: 4 of 18 Departments (Score: 0.658)

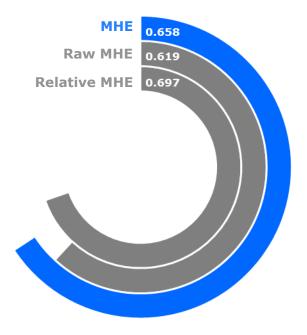
Table 2. Estimated ambient population<sup>2</sup> exposed to each hazard (2014).



Coastal Flood

#### 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.



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

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

#### NDPBA Honduras Report: Department Profile

## Vulnerability (V)

**Vulnerability<sup>3</sup> 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.

Environmental StressVulnerable Health StatusClean Water VulnerabilityInformation Access VulnerabilityEconomic ConstraintsGender InequalityPopulation Pressures

#### Table 3. Component scores for each vulnerability subcomponent

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

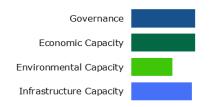
<sup>&</sup>lt;sup>3</sup> Vulnerability: The socioeconomic conditions that are associated with the susceptibility to disruptions in a country's normal functions.

<sup>&</sup>lt;sup>4</sup> Sub-indices: A combination of scaled indicators to represent a vulnerability theme (e.g. Communicable Disease). Values range from 0 (low) to 1 (high).

#### NDPBA Honduras Report: Department Profile

Coping Capacity (CC)

**Coping Capacity<sup>5</sup> 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.



	Governan	ce	<b>51.0</b> Homicides per 100k Persons	<b>155.9</b> Sexual Violence and Assault per 100k Persons	<b>25.1%</b> Households with Public Garbage Collection	<b>63.1%</b> Voter Participation (2013 Election)		
\$\$	Economic Capacity		<b>35.2%</b> Economic Activity Rate	<b>98.4%</b> Employment Rate	<b>15.1%</b> Population in Highest Wealth Quintile			
<b>E</b>	Environm Capacity	ental	<b>18.2%</b> Natural Protected Area					
m	Infrastrue Capacity	cture						
		Health Care Capacity		<b>3.2</b> Hospital Beds per 10,000 Persons	<b>2.1</b> Physicians per 10,000 Persons	<b>7.8</b> Nurses per 10,000 Persons	<b>29.5 km</b> Average Distance to Nearest Hospital	<b>86.4%</b> Children Completed Immunization Schedule
	Communications Capacity		<b>19.2%</b> Households with Access to Fixed Phone Line	<b>64.1%</b> Households with Access to Mobile Phone				
		Trans Capac	portation ity	<b>27.4 km</b> Average Distance to Nearest Port or Airport	<b>15.9 km</b> Total Length of Road per km <sup>2</sup> (area)			

Table 4. Component scores for each coping capacity subcomponent

<sup>&</sup>lt;sup>5</sup> Coping Capacity: The systems, means, and abilities of a country to absorb and respond to events that could potentially disrupt normal function.

## Lack of Resilience (LR)

## Lack of Resilience<sup>6</sup> 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.







Population Pressures

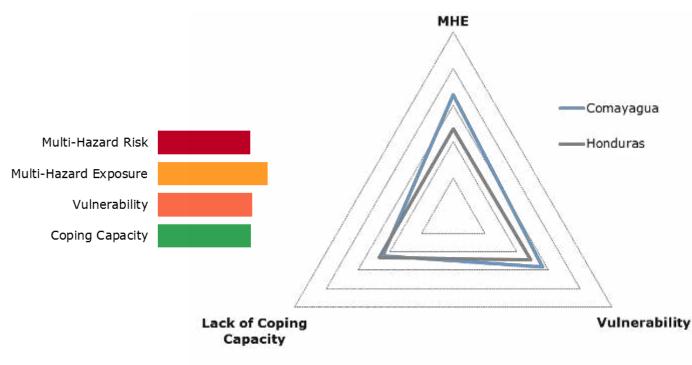


Environmental Capacity

## Multi-Hazard Risk (MHR)

#### Multi-Hazard Risk<sup>7</sup> 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.* 

<sup>&</sup>lt;sup>6</sup> Lack of Resilience: The susceptibility to impact from the short-term inability to absorb, respond to, and recover from disruptions to a country's normal function. This index provides a hazard-independent look at current socio-economic conditions.

<sup>&</sup>lt;sup>7</sup> Multi-Hazard Risk: The likelihood of losses or disruptions to a country's normal function due to interaction between multi-hazard exposure, socioeconomic vulnerability, and coping capacity.

## Successes



## **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

## **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.



#### 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.





# Better solutions. Fewer disasters. Safer world.

NDPBA Honduras Report 1305 N. Holopono Street, Suite 2 Kihei, Hawaii, 96753 Phone: (808) 891-0525 | Fax: (808) 891-0526

ndpba@pdc.org | www.pdc.org

© 2018 Pacific Disaster Center