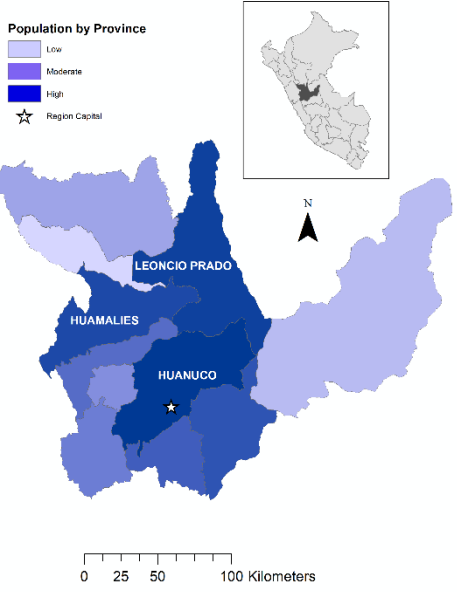


A photograph of a large, snow-capped mountain peak, likely in the Andes, reflected in a calm body of water. The sky is a clear, deep blue. The foreground shows a grassy plain and the water's surface, which perfectly mirrors the mountain and sky above.

Peru: Regional Profiles

National Disaster Preparedness Baseline Assessment

Region: Huánuco



Region Capital: Huánuco
 Region Area: 38,639 km²

Huánuco is one of twenty-five regions in Peru. Located in central Peru, the predominate economic activities of the region include service industries, agriculture and commerce. Huánuco is the region’s capital. As of 2015, the region’s population was estimated at 860,537; with the highest percentage of its population residing in the provinces of Huánuco, Huamalies and Leoncio Prado. Relative to the rest of Peru, the population of Huánuco has lower than average life expectancy (71.5 years) and access to improved water sources (73.5%), while having higher than average poverty (40.1%) and illiteracy (13.4%).



Multi-Hazard Risk (MHR) ¹

Score = 0.433, Rank = 19 of 25

Of the twenty-five regions of Peru, Huánuco ranks 19th in multi-hazard risk (MHR = 0.433). Table 1 outlines the individual components that contribute to risk. As shown in the bar chart of Figure 1, Huánuco’s low multi-hazard risk is a function of its very low multi-hazard exposure (MHE = 0.179), very high vulnerability (V = 0.545), and low coping capacity (CC = 0.424). The ternary graph at right shows that Huánuco’s exposure is significantly lower than the national average, while vulnerability and lack of coping capacity are slightly higher.

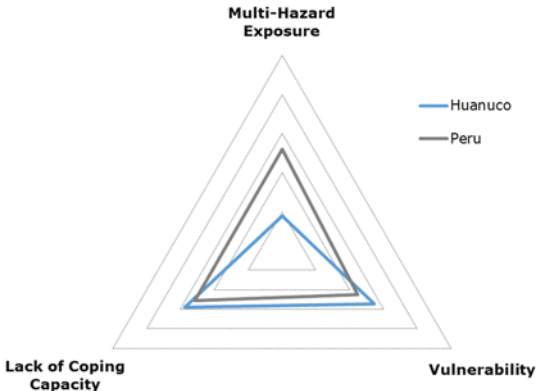
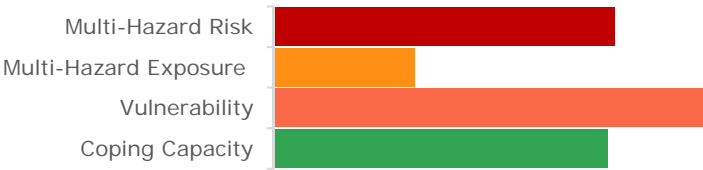


Figure 1. Components of the Multi-Hazard Risk Score compared to the national average.

¹ **Multi-Hazard Risk (MHR)**: An index that measures the likelihood of losses or disruptions to a region’s normal function due to interaction between multi-hazard exposure, socioeconomic vulnerability and coping capacity. $MHR = (MHE + V + (1-CC))/3$. Values range from 0-1.

Components of Multi-Hazard Risk (MHR) ²

Table 1. Scores and ranks for each component of the Multi-Hazard Risk Score.

Multi-Hazard Exposure (MHE)		Vulnerability (V)		Coping Capacity (CC)	
Very Low		Very High		Low	
Score	Rank (of 25)	Score	Rank (of 25)	Score	Rank (of 25)
0.179	23	0.545	5	0.424	18

Multi-Hazard Exposure (MHE) ³

Score = 0.179, Rank = 23 of 25

Huánuco has very low multi-hazard exposure relative to other regions of Peru (MHE = 0.179). This score is a function of both Raw and Relative MHE, as shown in Figure 2. The Raw MHE Score is an index reflecting the absolute value of population exposed to multiple hazards. This score can aid in understanding the overall scale of hazard exposure. The Relative MHE Score is an index reflecting the proportion of the region’s base population exposed. This score can assist in the determination of how important hazards are, and can help prioritize disaster management activities across regions. Estimates of exposure by hazard type are summarized in Table 2.

Table 2. Estimated ambient population⁴ exposed to each hazard type.

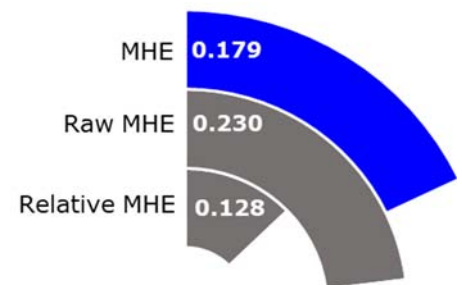
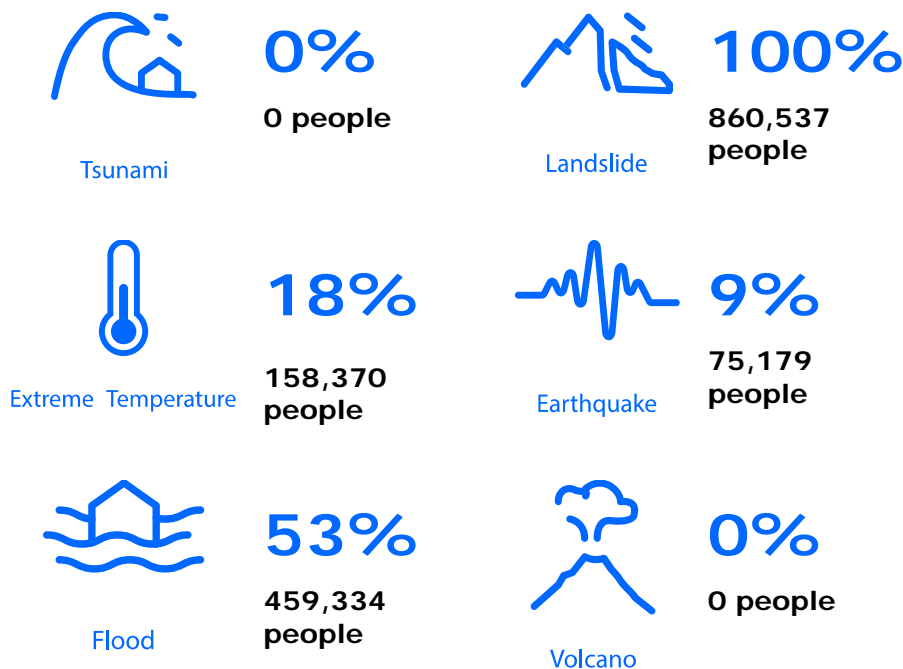


Figure 2. Average, raw and relative Multi-Hazard Exposure Scores.

² $MHR = (MHE + V + (1-CC))/3$.

³ **Multi Hazard Exposure (MHE)**: An index based on the estimated average exposure of the population to six hazard types: tsunamis, landslides, extreme temperature, earthquakes (MMI VII and above), floods and volcanos. Average exposure considers both raw average exposure and relative average exposure as a proportion of total population. Values range from 0-1.

⁴ **Ambient Population**: 24-hour average estimate of the population; typically differs from census population.

Vulnerability (V) ⁵

Score = 0.545, Rank = 5 of 25

Huánuco has very high vulnerability relative to other Peruvian regions (V = 0.545). The bar chart on the right displays the composition of its overall Vulnerability Score. As shown, vulnerability in Huánuco is driven primarily by information access, clean water access, and gender inequality. The table below summarizes the individual indicators within each socio-economic theme.

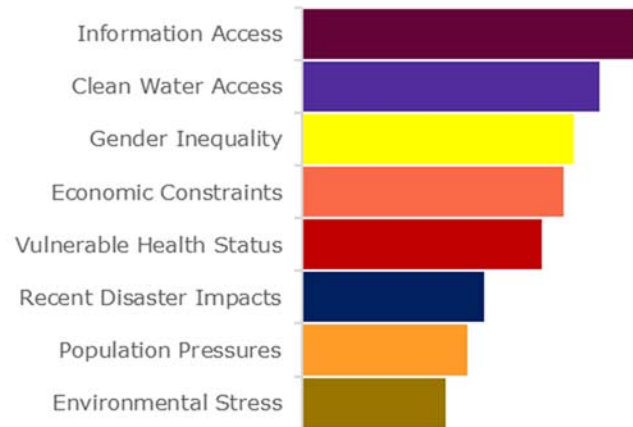








Figure 3. Components of the Vulnerability Score by relative contribution.

Table 3. Indicators of vulnerability grouped by theme.

	Environmental Stress	1.00 % of total regional area with irrigation-fed agriculture	7.8 % of total regional area with severe erosion				
	Vulnerable Health Status	22.4 Infant mortality rate per 1k births	61.8 Maternal deaths per 100k births	71.5 Average life expectancy (years) at birth	29.0 % of children under 5 years of age that are malnourished	4.7 % of population with 1 or more disability	
	Clean Water Vulnerability	73.5 % households with access to improved water	39.5 % households with access to flush toilets				
	Information Access Vulnerability	13.4 % of population 15yrs and older that are illiterate	8.2 Average years of schooling	70.2 % primary school enrollment	8.5 % households with internet	62.9 % households with television	76.7 % households with radio
	Economic Constraints	0.62 Ratio of dependents to working age population (15-64 years)	54.77 Ratio of average monthly household expenses to income	40.1 % of population monetarily impoverished			
	Gender Inequality	0.49 Proportion of female representatives in local government	0.74 Ratio of female to male secondary enrollment	0.80 Ratio of female to male labor participation			

⁵ **Vulnerability (V)**: An index that measures the socioeconomic conditions associated with susceptibility to disruptions in a region's normal functions. Values range from 0-1.



Population Pressures

0.8
% Average annual population change (2010-2015)



Recent Disaster Impacts

495.8 Average annual hazard-related deaths per 10k persons (2010-2014)
2.1 Average annual number of homes destroyed by recent hazards per 10k persons (2010-2014)

Coping Capacity (CC) ⁶

Score = 0.424, Rank = 18 of 25

Huánuco has a low coping capacity relative to other regions (CC = 0.424). The bar chart on the right displays the composition of its overall Coping Capacity Score. As shown, coping capacity in Huánuco is hindered primarily by its economic, and environmental capacities.

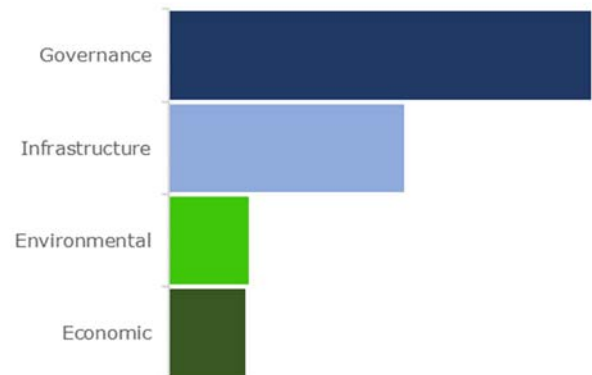


Figure 4. Components of the Coping Capacity Score by relative contribution.

Table 4. Indicators of coping capacity grouped by theme.



Economic Capacity

\$869 Average monthly income (\$)
\$7,070 Gross domestic product per capita



Governance

1.00 Registered cases of sexual violence per 10k persons
0.06 Registered cases of missing persons per 10k persons
0.003 Average annual number of social conflicts per 10k persons (active and resolved)
5,970 # of voters per 10k persons (2014 election)






Environmental Capacity

4.3 % protected or reforested land

⁶ **Coping Capacity (CC)**: An index that measures the systems, means and abilities of a region to absorb and respond to events that could potentially disrupt normal function. Values range from 0-1.



Infrastructure Capacity

	Healthcare Capacity	10.8 # of hospital beds per 10k persons	23.8 # of nurses per 10k persons	7.8 # of physicians per 10k persons
	Communications Capacity	7.5 % households with fixed phone line	82.6 % households with mobile phone	
	Transportation Capacity	1.8 Port/airport density per 10,000 sq km	1,308.8 Road/rail density per 10,000 sq km	

Resilience (R) ⁷

Score = 0.440, Rank = 20 of 25

Resilience is a function of both vulnerability and coping capacity. Huánuco is less resilient than the national average, and its low Resilience Score (R = 0.440) is due to its very high vulnerability and low coping capacity. The region’s baseline indicators suggest a focus for resilience-building efforts. In Huánuco, the thematic areas with the weakest relative scores are summarized in the table below. Readers can additionally consult Appendix 1 for a comprehensive assessment of its need for specific program types relative to other regions.

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



Information Access Vulnerability



Gender Inequality



Economic Capacity

⁷ **Resilience (R)**: An index that offers a hazard-independent measure of current socio-economic conditions affecting the short-term ability to absorb, respond to, and recover from disruptions to a region’s normal function. Values range from 0-1.