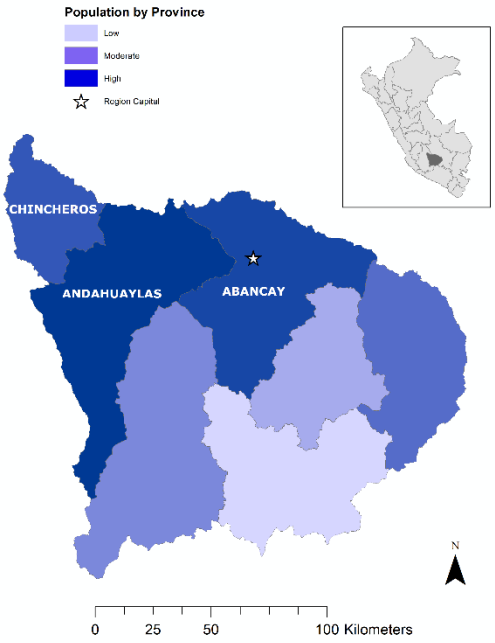
PDC | GLOBAL

Peru:
Regional Profiles

National Disaster Preparedness Baseline Assessment

Region: Apurímac



Region Capital: Abancay
Region Area: 22,527 km^2

Apurímac is one of twenty-five regions in Peru. Located in the southern interior of Peru, Apurímac is a growing adventure-sports destination bordering the popular tourism destination of Cusco. Mining is also a predominate economic activity. Abancay is the region capital. As of 2015, Apurímac's population was estimated at 458,830; with the highest percentage of its population residing in the provinces of Abancay, Andahuaylas and Chincheros. Relative to the rest of Peru, the population of Apurímac has higher than average access to improved water sources (91.4%); though lower than average life expectancy (70.2 years), and higher than average poverty (42.8%) and illiteracy (17.1%).

458,830
Population (2015)

70.2 yrs
Average life expectancy

42.8%
Population in poverty

17.1%
Illiterate population

91.4%
Access to improved water

Multi-Hazard Risk (MHR) [1]

Score = 0.486, Rank = 12 of 25

Of the twenty-five regions of Peru, Apurímac ranks 12th in multi-hazard risk (MHR = 0.486). Table 1 outlines the individual components that contribute to risk. As shown, Apurímac's moderate multi-hazard risk is a function of its very low multi-hazard exposure (MHE = 0.196), high vulnerability (V = 0.543), and very low coping capacity (CC = 0.282). The ternary graph at right shows that Apurímac's multi-hazard exposure is significantly lower than the national average, while its vulnerability and lack of coping capacity are higher.

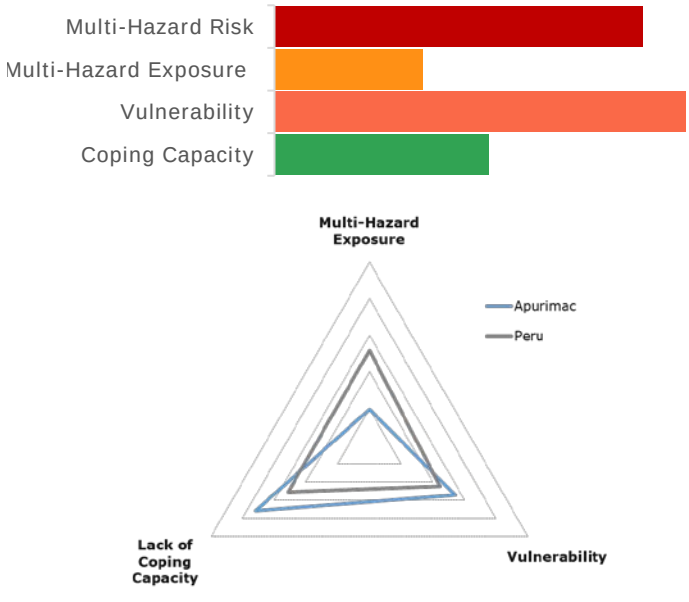


Figure 1. Components of the Multi-Hazard Risk Score compared to the national average.

[1] **Multi-Hazard Risk**: The likelihood of losses or disruptions to a region's normal function due to interaction between multi-hazard exposure, socioeconomic vulnerability and coping capacity.

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		High		Very Low	
Score	Rank (of 25)	Score	Rank (of 25)	Score	Rank (of 25)
0.196	22	0.543	6	0.282	24

Multi-Hazard Exposure (MHE) [3]

Score = 0.196, Rank = 22 of 25

Apurímac has very low multi-hazard exposure relative to other regions of Peru (MHE = 0.196). Percentages of Apurímac population exposed to varying hazards are summarized below.

Table 2. Estimated ambient population[4] exposed to each hazard type.

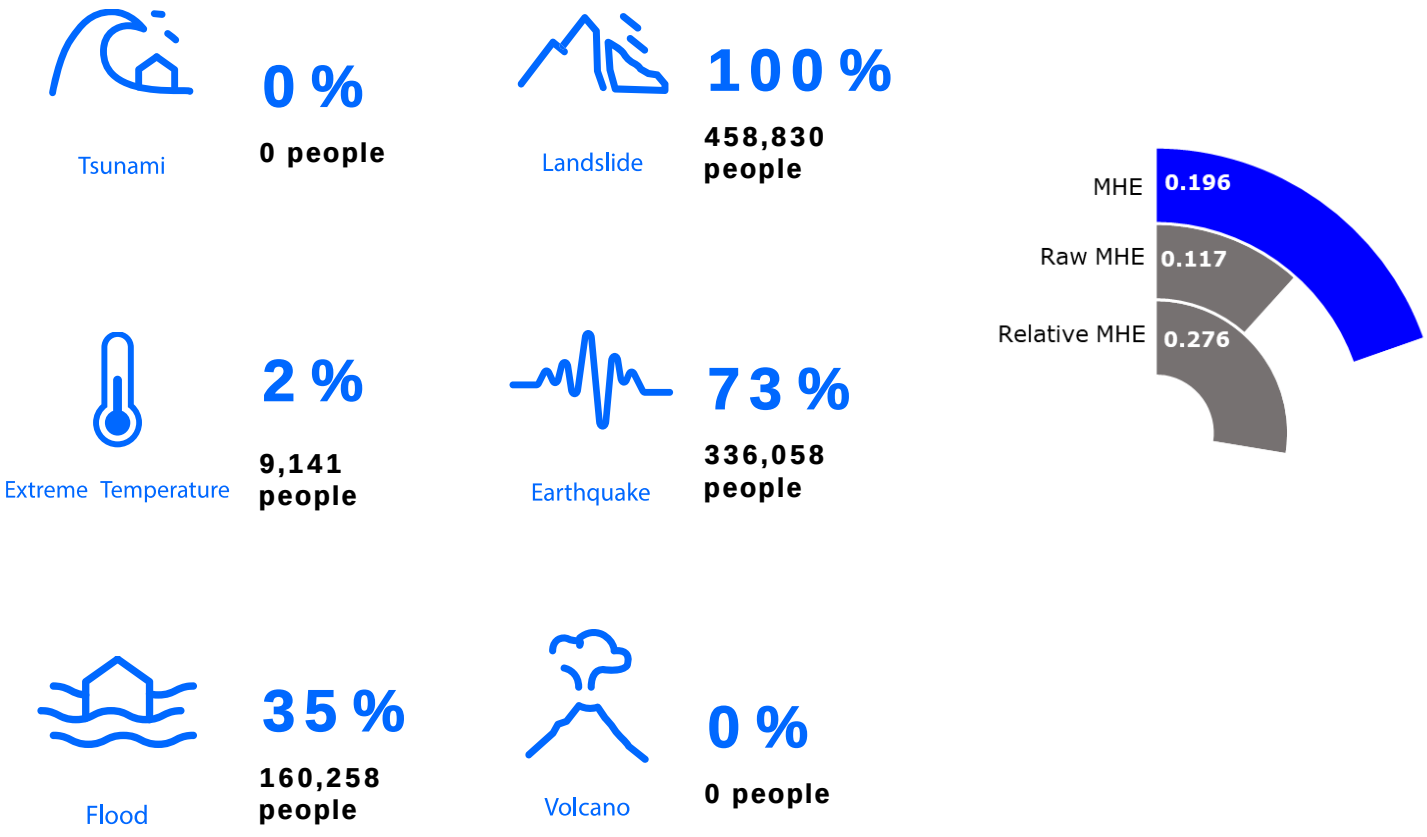


Figure 2. Average, raw and relative Multi-Hazard Exposure Scores.

[2] **MHR** = (MHE + V + (1-CC))/3.
[3] **Multi-Hazard Exposure**: Average exposure of the population to hazards.
[4] **Ambient Population**: 24-hour average estimate of the population; typically differs from census population.

Vulnerability (V) [5]

Score = 0.543, Rank = 6 of 25

Apurímac has high vulnerability relative to other Peruvian regions (V = 0.543). The bar chart on the right displays the composition of its overall Vulnerability Score. As shown, vulnerability in Apurímac is driven primarily by recent disaster impacts, environmental stress and information access. The table below summarizes the individual indicators within each socio-economic theme.

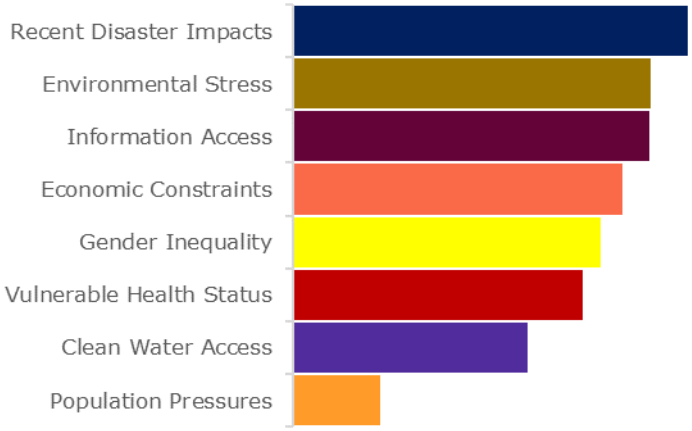


Figure 3. Components of the Vulnerability Score by relative contribution.

Table 3. Indicators of vulnerability grouped by theme.

	Environmental Stress	**5.8** % of total regional area with irrigation-fed agriculture	**22.8** % of total regional area with severe erosion				
	Vulnerable Health Status	**20.4** Infant mortality rate per 1k births	**24.6** Maternal deaths per 100k births	**70.2** Average life expectancy (years) at birth	**29.0** % of children under 5 years of age that are malnourished	**5.0** % of population with 1 or more disability	
	Clean Water Vulnerability	**91.4** % households with access to improved water	**43.5** % households with access to flush toilets				
	Information Access Vulnerability	**17.1** % of population 15yrs and older that are illiterate	**8.5** Average years of schooling	**78.6** % primary school enrollment	**4.4** % households with internet	**61.9** % households with television	**85.0** % households with radio
	Economic Constraints	**0.64** Ratio of dependents to working age population (15-64 years)	**51.80** Ratio of average monthly household expenses to income	**42.8** % of population monetarily impoverished			
	Gender Inequality	**0.49** Proportion of female representatives in local government	**0.61** Ratio of female to male secondary enrollment	**0.91** Ratio of female to male labor participation			

[5] **Vulnerability**: The socioeconomic conditions that are associated with susceptibility to disruptions in a region's normal functions.

Population Pressures	**0.6** % Average annual population change (2010-2015)		
Recent Disaster Impacts	**1,827.9** Average annual hazard-related deaths per 10k persons (2010-2014)	**3.9** Average annual number of homes destroyed by recent hazards per 10k persons (2010-2014)	

Coping Capacity (CC) [6]

Score = 0.282, Rank = 24 of 25

Apurímac has a very low coping capacity relative to other regions (CC = 0.282). The bar chart on the right displays the composition of its overall Coping Capacity Score. As shown, coping capacity in Apurímac is hindered primarily by its environmental and economic capacity. The table below summarizes the individual indicators within each socio-economic theme.

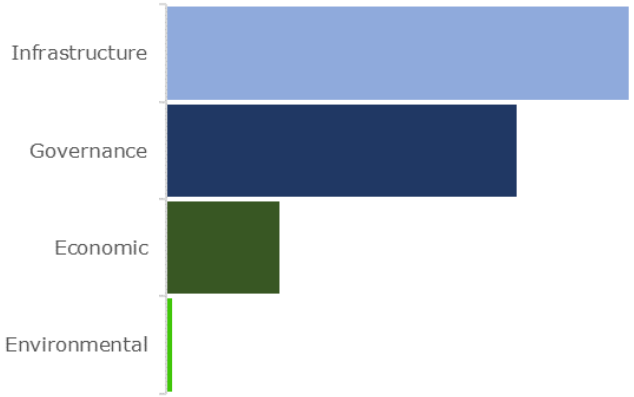


Figure 4. Components of the Coping Capacity Score by relative contribution.

Table 4. Indicators of coping capacity grouped by theme.

Economic Capacity	**$842** Average monthly income ($)	**$7,001** Gross domestic product per capita			
Governance	**2.52** Registered cases of sexual violence per 10k persons	**0.79** Registered cases of missing persons per 10k persons	**0.054** Average annual number of social conflicts per 10k persons (active and resolved)	**6,069** # of voters per 10k persons (2014 election)	
Environmental Capacity	**0.2** % protected or reforested land				

[6] **Coping Capacity**: The systems, means and abilities of a region to absorb and respond to events that could potentially disrupt normal function.

Infrastructure Capacity

Healthcare Capacity	**16.1** # of hospital beds per 10k persons	**30.5** # of nurses per 10k persons	**11.5** # of physicians per 10k persons
Communications Capacity	**4.3** % households with fixed phone line	**76.7** % households with mobile phone	
Transportation Capacity	**0.9** Port/airport density per 10,000 sq km	**2,602.4** Road/rail density per 10,000 sq km	

Resilience (R) [7]

Score = 0.370, Rank = 23 of 25

Resilience is a function of both vulnerability and coping capacity. Apurímac is less resilient than the national average, and its low Resilience Score (R = 0.370) is due to its high vulnerability and very low coping capacity. The region's baseline indicators suggest a focus for resilience-building efforts. In Apurímac, 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.

Recent Disaster Impacts | **Economic Capacity** | **Environmental Capacity**

[7] **Resilience** is a hazard-independent look at current socio-economic conditions affecting the short-term ability to absorb, respond to, and recover from disruptions to a region's normal function.