



PARAGUAY

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# CONCEPCIÓN

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## NDPBA DEPARTMENT PROFILE

# PARAGUAY

## CONCEPCIÓN

### CAPITAL: CONCEPCIÓN

Area: 21,931 (km<sup>2</sup>)

The Concepción department is located in the Eastern region of Paraguay. This department is divided into 11 districts: Concepción (The Capital), Belén, Horqueta, Loreto, San Carlos del Apa, San Lázaro, Yby Yaú, Azoté'y, Sargento José Félix López, San Alfredo, Paso Barreto. The department borders Brazil, and the departments of Presidente Hayes, Alto Paraguay, Amambay and San Pedro. The main economic sources are livestock and agriculture.



## RISK AND VULNERABILITY COMPONENT SCORE



### MULTI-HAZARD RISK (MHR) - High

Score: 0.601 • Rank: 5/18



### RESILIENCE (R) - Low

Score: 0.448 • Rank: 13/18



### MULTI-HAZARD EXPOSURE (MHE) - High

Score: 0.700 • Rank: 4/18



### VULNERABILITY (V) - Moderate

Score: 0.555 • Rank: 8/18



### COPING CAPACITY (CC) - Low

Score: 0.452 • Rank: 13/18



Population (2015)

**247,675**



Infant Mortality Rate

**14.5**



Illiterate population

**8.5%**



Access to improved water

**91.9%**



Average life expectancy

**74.4 years**

\*For more information on data and components please visit: <https://bit.ly/2LqVoUO>



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 4 / 18 DEPARTMENT  
SCORE: 0.700





MHE  
0.700


Raw MHE  
0.451


Relative MHE  
0.949

### ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:


 Inland Flood  
**37%**  
👤 94,325  
\$2.2 Billion

 Wildfire  
**89%**  
👤 225,352  
\$2.7 Billion

 Water Deficit  
**24%**  
👤 61,666  
\$508 Million

 Drought  
**90%**  
👤 227,534  
\$2.7 Billion

 Extreme Cold  
-  
👤 -  
-

 Storm  
**88%**  
👤 223,749  
\$2.7 Billion



## VULNERABILITY (V)

**RANK: 8 / 18 DEPARTMENTS ASSESSED**  
**SCORE: 0.555**

Vulnerability in Concepción is primarily driven by Economic Constraints and Population Pressures. The bar chart indicates the socioeconomic themes contributing to the department's overall Vulnerability score.



### Environmental Stress

0 1 **SCORE: 0.449** **RANK: 9/18 DEPARTMENTS ASSESSED**

**3.53%** Cultivated Area Change  
**15.77%** Deforestation



### Vulnerable Health Status

0 1 **SCORE: 0.534** **RANK: 5/18 DEPARTMENTS ASSESSED**

**74.44** Life Expectancy (years)  
**14.5** Infant Mortality Rate (per 1,000 live births)  
**156** Maternal Mortality Ratio  
**45.58** Adult Malnutrition  
**31.3%** Population with Disability  
**53.2%** Population Reporting Illness or Injury



### Clean Water Vulnerability

0 1 **SCORE: 0.335** **RANK: 10/18 DEPARTMENTS ASSESSED**

**91.94%** Households with Improved Water Source  
**61.72%** Households with Improved Sanitation



### Information Access Vulnerability

0 1 **SCORE: 0.619** **RANK: 8/18 DEPARTMENTS ASSESSED**

**8.5%** Illiteracy Rate (Age 10+)  
**7.6** Average Years of Schooling  
**9.35%** Households with Internet  
**81.64%** Households with Television  
**80.6%** Households with Radio



### Economic Constraints

0 1 **SCORE: 0.724** **RANK: 5/18 DEPARTMENTS ASSESSED**

**66.36** Economic Dependency Ratio  
**43.97%** Poverty Rate  
**0.42** Income Inequality (GINI)



### Gender Inequality

0 1 **SCORE: 0.592** **RANK: 4/18 DEPARTMENTS ASSESSED**

**0.15** Female to Male Secondary Education\*  
**0.39** Female to Male Economic Activity\*  
**0.27** Female to Male Average Monthly Income\*

\*Higher values indicate greater gender disparity.



### Population Pressures

0 1 **SCORE: 0.633** **RANK: 8/18 DEPARTMENTS ASSESSED**

**1.55%** Average Annual Population Change



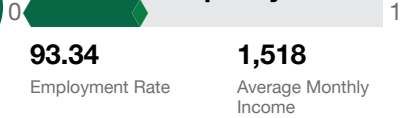
## COPING CAPACITY (CC)

**RANK: 13 / 18 DEPARTMENTS ASSESSED**  
**SCORE: 0.452**

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



### Economic Capacity

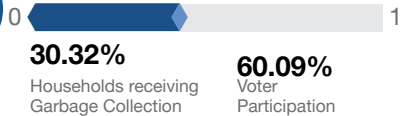


SCORE: 0.316

RANK: 17/18 DEPARTMENTS ASSESSED



### Governance

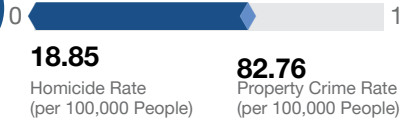


SCORE: 0.419

RANK: 12/18 DEPARTMENTS ASSESSED



### Crime Governance



SCORE: 0.616

RANK: 9/18 DEPARTMENTS ASSESSED



### Environmental Capacity



SCORE: 0.582

RANK: 5/18 DEPARTMENTS ASSESSED

**(COPING CAPACITY CONTINUED)**



**Infrastructure Capacity**



**Health Care Capacity** **SCORE: 0.422** **RANK: 10/18 DEPARTMENTS ASSESSED**

<b>8.77</b> Hospital Beds per 10,000 People	<b>11.31</b> Physicians per 10,000 People	<b>15.41</b> Nurses per 10,000 People	<b>13,776.36</b> Average Distance to Nearest Hospital (km2)	<b>77.23%</b> Vaccination Coverage	<b>71.48%</b> Access to Healthcare
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**Transportation Capacity** **SCORE: 0.466** **RANK: 9/18 DEPARTMENTS ASSESSED**

<b>0.37</b> Road Density (km per sq. km)	<b>51.66</b> Distance to Airport or Seaport (km)
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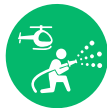
**Communications Capacity** **SCORE: 0.620** **RANK: 6/18 DEPARTMENTS ASSESSED**

<b>96.6%</b> Households with Mobile Phone	<b>8.00%</b> Households with Fixed Phone
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**Energy Capacity** **SCORE: 0.828** **RANK: 14/18 DEPARTMENTS ASSESSED**

<b>97.79%</b> Households Connected to Electric Grid
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**Disaster Management Capacity**



<b>4.51</b> Ambulances per 100,000 People	<b>244.6</b> Distance to Fire Station	<b>132.33</b> Distance to Warehouse
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**RESILIENCE (R)**

**RANK: 13 / 18 DEPARTMENTS**  
**SCORE: 0.448**

Concepción's score and ranking are due to Moderate Vulnerability combined with Low Coping Capacity scores.

**Below are the four thematic areas with the weakest relative scores:**



**Economic  
Constraints**



**Population  
Pressures**



**Health Care  
Capacity**



**Transportation  
Capacity**



## HAZARD-SPECIFIC RISK (HSR)



**Flood**

RANK: 2  
SCORE: 0.481



**Drought**

RANK: 7  
SCORE: 0.373



**Wildfire**

RANK: 2  
SCORE: 0.416



**Extreme Cold**

RANK: 9  
SCORE: 0.000



**Water Deficit**

RANK: 12  
SCORE: 0.110



**Storm**

RANK: 3  
SCORE: 0.488



## MULTI-HAZARD RISK (MHR)

**5 / 18**

Rank within departments  
Score: 0.601



Concepción's score and ranking are due to High Multi-hazard exposure combined with Moderate Vulnerability and Low Coping Capacity scores.

### Multi-hazard risk component scores compared to overall average country scores:



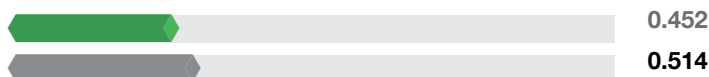
**Multi-Hazard Exposure**



**Vulnerability**



**Coping Capacity**



Department score  
 Country score

# CONCEPCIÓN RECOMMENDATIONS



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## Economic Constraints

Economic constraints have individual, household, community, and district-wide influence. Limitations on available financial resources reduce opportunities to invest in mitigation and preparedness measures and limit Concepción's ability to facilitate short- and long-term recovery.

Findings show that Concepción ranks 5th highest in the country in overall Economic Constraints. Concepción has the third highest poverty rate (44%) and the highest age dependency ratio in Paraguay. Focus efforts on creating public policies that ensure equal opportunity for employment and fair wages.

Expand public assistance programs to increase opportunities for economic mobility and enhance access to resources, particularly for elderly populations and families with young children.

Assess disaster response and recovery plans to ensure that economically vulnerable populations are incorporated. This includes plans for short-term response and long-term recovery plans, as economically disadvantaged populations are often more likely to be severely impacted by disasters and have slower to recovery times.



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# CONCEPCIÓN RECOMMENDATIONS

## 2

### Population Pressures

Rapid changes in population size and distribution can alter population vulnerability characteristics presenting planning challenges and destabilizing social, economic, and environmental systems. Increased population pressures require disaster managers to realign needs, institutional structures, and available resources to support delivery of basic resources before, during, and after an event.

Findings show that the average annual total population change is 1.55%, ranking 8th in Paraguay. As the population grows, so do the risks associated with disasters due to urbanization and expanded public resource needs. Increases in demands on health care, emergency services, and public programs can put strain on already limited resources.

Continue to closely monitor the population to adjust plans, policies and programs accordingly. Promoting economic development opportunities for an increasing population will help alleviate economic constraints, another key driver of Vulnerability in Concepción.

Sustainable development plans must consider hazard exposure, and apply zoning restrictions is hazard-prone to reduce risk and prevent disasters. Findings show that Concepción is susceptible to floods, storms, wildfire, and seasonal drought.

## CONCEPCIÓN RECOMMENDATIONS

# 3

### Health Care Capacity

Robust access to skilled caregivers and the dedicated facilities for the treatment of injury and disease during non-disaster times greatly enhances the ability of the served population to absorb and manage post-disaster impacts to health, and increases the likelihood that disaster associated health and medical impacts may be addressed.

The population in Concepción is growing and so will the need to expand health care capacity. Findings show that just 71% of sick and injured persons reported that they consulted a doctor in 2017, and vaccination coverage rates were just 77%.

The average distance between hospitals and populated places is over 13,000 square kilometers. Removing barriers such as distance could improve overall utilization of services and increase the health of the population. Providing incentives to work in the health care sector, especially within rural communities will ensure enhanced and equitable access to health care.

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# CONCEPCIÓN RECOMMENDATIONS

## 4

### Transportation Capacity

Denser and more diverse transportation networks provide more options for bringing outside resources into an impacted area and increase the ability of response stakeholders to access department populations. Improved transportation capacity supports all aspects of Concepción's ability to distribute resources before, during, and after a disaster.

Invest in transportation infrastructure that incorporates holistic risk assessment and sustainable development plans. Ensure that environmental mitigation plans for transportation projects consider the environmental stresses and hazards that impact Concepción.

Increased transportation networks can also enhance access to markets, which can help reduce the economic constraints within the population. Economic benefits and enhanced access to health care should be the focus of enhancements to the transportation network in Concepción. Evacuation routes and emergency response plans should be adapted as construction is planned and implemented.

**Better solutions.  
Fewer disasters.**

# Safer world.

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