



Ina Diarte Photography

PARAGUAY

AMAMBAY

NDPBA DEPARTMENT PROFILE

PARAGUAY

AMAMBAY

CAPITAL: PEDRO JUAN CABALLERO

Area: 14,853 (km²)

The Amambay department is located in the Eastern region of Paraguay. This department is divided into 5 districts: Pedro Juan Caballero (The Capital), Bella Vista, Capitán Bado, Zanja Pytã, Karapaí. The department borders Brazil, and the departments of Canindeyú, San Pedro and Concepción. The main economic sources are agriculture and commercial activities with the border of Brazil.



RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - Moderate

Score: 0.536 • Rank: 10/18



RESILIENCE (R) - Moderate

Score: 0.534 • Rank: 8/18



MULTI-HAZARD EXPOSURE (MHE) - Moderate

Score: 0.676 • Rank: 8/18



VULNERABILITY (V) - Moderate

Score: 0.471 • Rank: 9/18



COPING CAPACITY (CC) - High

Score: 0.538 • Rank: 5/18



Population (2015)

167,050



Infant Mortality Rate

14.9



Illiterate population

12.1%



Access to improved water

84.4%



Average life expectancy

74.1 years

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



MULTI-HAZARD EXPOSURE (MHE)

RANK: 8 / 18 DEPARTMENT
SCORE: 0.676




MHE
0.676

Raw MHE
0.398

Relative MHE
0.954


ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Inland Flood




25%
 👤 **45,412**
\$1.6 Billion

Wildfire




76%
 👤 **138,259**
\$1.9 Billion

Water Deficit



43%
 👤 **78,523**
\$832.9 Million

Drought




93%
 👤 **168,817**
\$2.4 Billion

Extreme Cold



-
 👤 **-**
-

Storm



97%
 👤 **174,990**
\$2.4 Billion



VULNERABILITY (V)

RANK: 9 / 18 DEPARTMENTS ASSESSED
SCORE: 0.471

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



Environmental Stress

0 1 **SCORE: 0.675** **RANK: 3/18 DEPARTMENTS ASSESSED**

5.96% Cultivated Area Change
26.24% Deforestation



Vulnerable Health Status

0 1 **SCORE: 0.453** **RANK: 8/18 DEPARTMENTS ASSESSED**

74.05 Life Expectancy (years)
14.9 Infant Mortality Rate (per 1,000 live births)
152 Maternal Mortality Ratio
52.26 Adult Malnutrition
24.5% Population with Disability
42.8% Population Reporting Illness or Injury



Clean Water Vulnerability

0 1 **SCORE: 0.210** **RANK: 14/18 DEPARTMENTS ASSESSED**

84.37% Households with Improved Water Source
91.12% Households with Improved Sanitation



Information Access Vulnerability

0 1 **SCORE: 0.469** **RANK: 12/18 DEPARTMENTS ASSESSED**

12.1% Illiteracy Rate (Age 10+)
8.6 Average Years of Schooling
18.60% Households with Internet
89.39% Households with Television
82.5% Households with Radio



Economic Constraints

0 1 **SCORE: 0.301** **RANK: 16/18 DEPARTMENTS ASSESSED**

58.77 Economic Dependency Ratio
15.24% Poverty Rate
0.43 Income Inequality (GINI)



Gender Inequality

0 1 **SCORE: 0.476** **RANK: 8/18 DEPARTMENTS ASSESSED**

0.20 Female to Male Secondary Education*
0.27 Female to Male Economic Activity*
0.25 Female to Male Average Monthly Income*

*Higher values indicate greater gender disparity.



Population Pressures

0 1 **SCORE: 0.714** **RANK: 6/18 DEPARTMENTS ASSESSED**

1.72% Average Annual Population Change



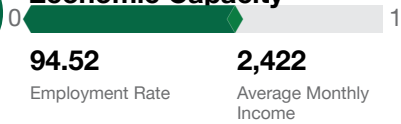
COPING CAPACITY (CC)

RANK: 5 / 18 DEPARTMENTS ASSESSED
SCORE: 0.538

Amambay 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

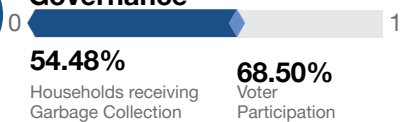


SCORE: 0.592

RANK: 7/18 DEPARTMENTS ASSESSED



Governance

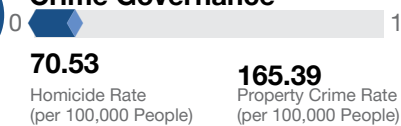


SCORE: 0.586

RANK: 5/18 DEPARTMENTS ASSESSED



Crime Governance



SCORE: 0.113

RANK: 18/18 DEPARTMENTS ASSESSED



Environmental Capacity



SCORE: 0.348

RANK: 8/18 DEPARTMENTS ASSESSED

(COPING CAPACITY CONTINUED)



Infrastructure Capacity



Health Care Capacity **SCORE: 0.356** **RANK: 14/18 DEPARTMENTS ASSESSED**

5.96 Hospital Beds per 10,000 People	10.46 Physicians per 10,000 People	10.22 Nurses per 10,000 People	16,392.99 Average Distance to Nearest Hospital (km ²)	91.33% Vaccination Coverage	62.72% Access to Healthcare
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Transportation Capacity **SCORE: 0.499** **RANK: 7/18 DEPARTMENTS ASSESSED**

0.49 Road Density (km per sq. km)	50.48 Distance to Airport or Seaport (km)
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Communications Capacity **SCORE: 0.846** **RANK: 3/18 DEPARTMENTS ASSESSED**

98.5% Households with Mobile Phone	11.45% Households with Fixed Phone
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Energy Capacity **SCORE: 0.889** **RANK: 11/18 DEPARTMENTS ASSESSED**

98.54% Households Connected to Electric Grid



Disaster Management Capacity



4.26 Ambulances per 100,000 People	200.7 Distance to Fire Station	135.7 Distance to Warehouse
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RESILIENCE (R)

RANK: 8 / 18 DEPARTMENTS
SCORE: 0.534

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

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



Population Pressures



Environmental Stress



Health Care Capacity



Transportation Capacity



HAZARD-SPECIFIC RISK (HSR)



Flood

RANK: 9
SCORE: 0.266



Drought

RANK: 12
SCORE: 0.315



Wildfire

RANK: 13
SCORE: 0.292



Extreme Cold

RANK: 9
SCORE: 0.000



Water Deficit

RANK: 10
SCORE: 0.153



Storm

RANK: 5
SCORE: 0.424



MULTI-HAZARD RISK (MHR)



10 / 18

Rank within departments
Score: 0.536

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

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



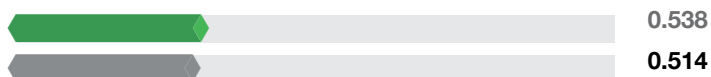
Multi-Hazard Exposure



Vulnerability



Coping Capacity



Department score
 Country score

AMAMBAY RECOMMENDATIONS



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 1.72%, which is the 6th highest in Paraguay. As the population grows so do the risks associated with disasters due to urbanization and expanded public needs. Increases in demands on health care, emergency services, and public programs will strain the already limited resources. Continue to closely monitor the population to adjust plans, policies and programs accordingly.

Investing in resilient and eco-conscious infrastructure also needs to be a priority, as environmental stress is another major driver of vulnerability in Amambay. Infrastructure projects should ensure construction efficiently use resources, focus on renewable and local materials, and implement proper mitigation techniques. Access to healthcare should be one of the primary areas of investment. Seek public-private partnerships to help fund projects to increase access to critical infrastructure. Ensure that distribution of infrastructure projects is equitable and sustainable for disaster risk reduction into the future.

AMAMBAY RECOMMENDATIONS

2

Environmental Stress

Environmental stressors such as the depletion, degradation, or contamination of natural resources can exacerbate natural hazards and negatively impact the health, safety, and economic security of Amambay's population.

In Amambay, increases in cultivated area are ranked as the 3rd highest in Paraguay. Similarly, deforestation is estimated at 26.24%, which ranks as the 4th highest in the country. With climate change and growing population pressures the need to put in place environmental protections is vital to ensuring sustainable development.

Forest management and sustainable development need to be carefully monitored to that ensure critical ecosystems are protected. Promote sustainable agricultural practices by providing trainings and incentives where possible. Focus areas can include the use of drought resistant crops, organic practices, as well as other methods to reduce environmental impacts of agriculture.

AMAMBAY 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 Amambay is growing and so will the need to expand health care capacity. Findings show that there are only 5.96 hospital beds per 10,000 persons. Invest in increased inpatient capacity by acquiring more hospital beds. Additionally, there are only 10.46 physicians per 10,000 persons. Work with NGOs and other partners to increase the number of medical workers available.

The average distance between hospitals and populated places is 16,393 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.

AMAMBAY 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 Amambay'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 Amambay. Additionally, the growing population should be a primary focus when planning transportation projects, to reduce bottlenecks and increase evacuation routes.

Increased transportation networks can also bring economic benefits by enhancing access to markets. Increased access to health care and other critical infrastructure should be the focus of enhancements to the transportation network. 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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