



PARAGUAY

ALTO PARAGUAY

NDPBA DEPARTMENT PROFILE

PARAGUAY

ALTO PARAGUAY

CAPITAL: FUERTE OLIMPO

Area: 90,131 (km²)

The Alto Paraguay department is located in the Western region of Paraguay. This department is divided into 5 districts: Fuerte Olimpo (The Capital), Bahia Negra, Carmelo Peralta, Mayor Pablo Lagerenza and Puerto Casado. The department borders Bolivia, Brazil, and the departments of Presidente Hayes, Boquerón, and Concepcion. The main economic sources are livestock and agriculture.



RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - Very Low

Score: 0.449 • Rank: 15/18



RESILIENCE (R) - Very Low

Score: 0.326 • Rank: 18/18



MULTI-HAZARD EXPOSURE (MHE) - Very Low

Score: 0.000 • Rank: 18/18



VULNERABILITY (V) - Very High

Score: 0.749 • Rank: 1/18



COPING CAPACITY (CC) - Very Low

Score: 0.401 • Rank: 17/18



Population (2015)

17,548



Infant Mortality Rate

33.7



Illiterate population

14.9%



Access to improved water

78.3%



Average life expectancy

69.6 years

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



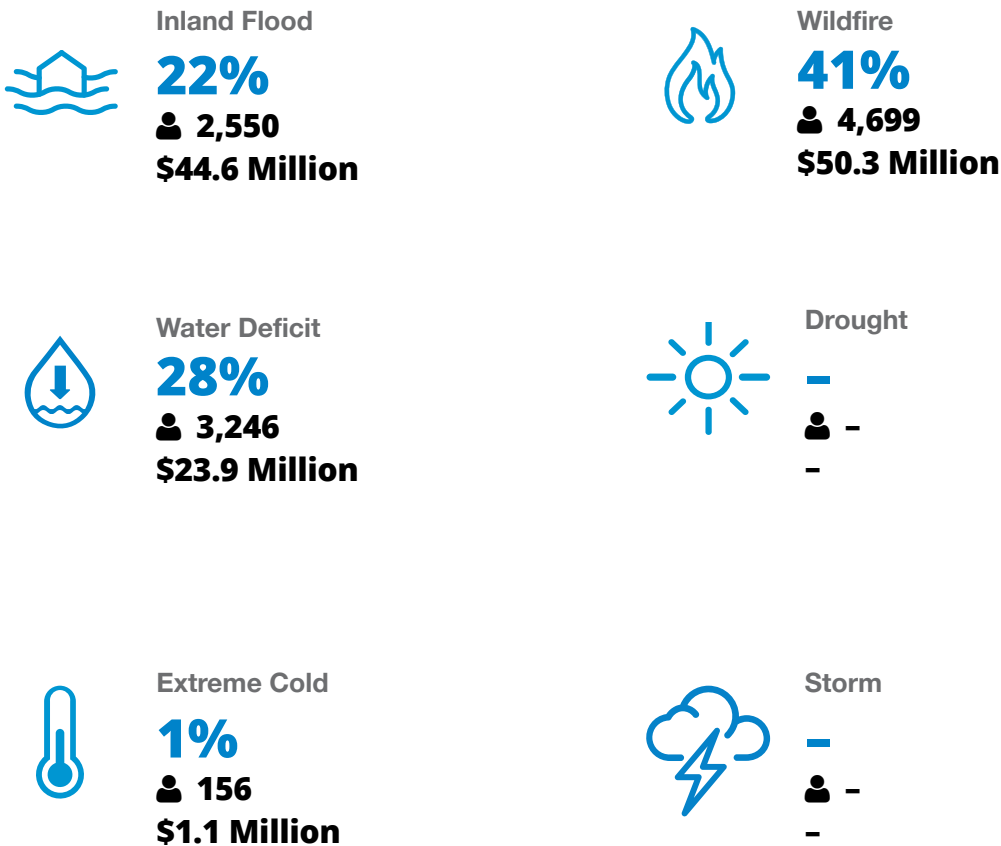
MULTI-HAZARD EXPOSURE (MHE)

RANK: 18 / 18 DEPARTMENT
SCORE: 0.000



MHE Index values of 0.000 indicate that Alto Paraguay has the lowest cumulative exposure in comparison to all other departments in Paraguay. Zero values do not indicate “No Exposure” to hazards.

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:





VULNERABILITY (V)

RANK: 1 / 18 DEPARTMENTS ASSESSED
SCORE: 0.749

Vulnerability in Alto Paraguay is primarily driven by Information Access Vulnerability and Gender Inequality. The bar chart indicates the socioeconomic themes contributing to the department's overall Vulnerability score.



Environmental Stress

0 1 **SCORE: 0.329** **RANK: 14/18 DEPARTMENTS ASSESSED**

-4.79% **22.70%**
Cultivated Area Change Deforestation



Vulnerable Health Status

0 1 **SCORE: 0.743** **RANK: 1/18 DEPARTMENTS ASSESSED**

69.58 **33.7** **280.9** **46.73** **34.3%** **37.5%**
Life Expectancy (years) Infant Mortality Rate (per 1,000 live births) Maternal Mortality Ratio Adult Malnutrition Population with Disability Population Reporting Illness or Injury



Clean Water Vulnerability

0 1 **SCORE: 0.740** **RANK: 1/18 DEPARTMENTS ASSESSED**

78.29% **26.55%**
Households with Improved Water Source Households with Improved Sanitation



Information Access Vulnerability

0 1 **SCORE: 0.914** **RANK: 1/18 DEPARTMENTS ASSESSED**

14.9% **6.2** **7.34%** **75.41%** **75.0%**
Illiteracy Rate (Age 10+) Average Years of Schooling Households with Internet Households with Television Households with Radio



Economic Constraints

0 1 **SCORE: 0.768** **RANK: 4/18 DEPARTMENTS ASSESSED**

61.88 **46.47%** **0.5**
Economic Dependency Ratio Poverty Rate Income Inequality (GINI)



Gender Inequality

0 1 **SCORE: 0.912** **RANK: 2/18 DEPARTMENTS ASSESSED**

0.54 **0.40** **0.44**
Female to Male Secondary Education* Female to Male Economic Activity* Female to Male Average Monthly Income*

*Higher values indicate greater gender disparity.



Population Pressures

0 1 **SCORE: 0.835** **RANK: 5/18 DEPARTMENTS ASSESSED**

1.98%
Average Annual Population Change



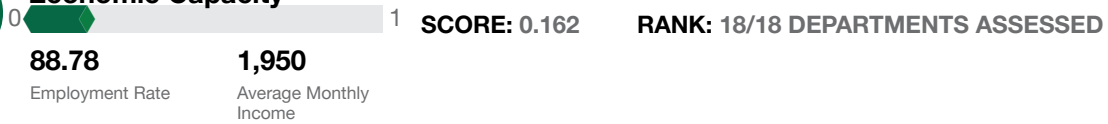
COPING CAPACITY (CC)

RANK: 17 / 18 DEPARTMENTS ASSESSED
SCORE: 0.401

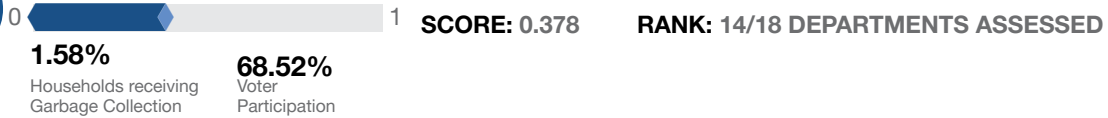
Alto Paraguay exhibits weaker Coping Capacity in the areas of Transportation Capacity and Communications Capacity. The bar chart indicates the socioeconomic themes contributing to the department's overall Coping Capacity score.



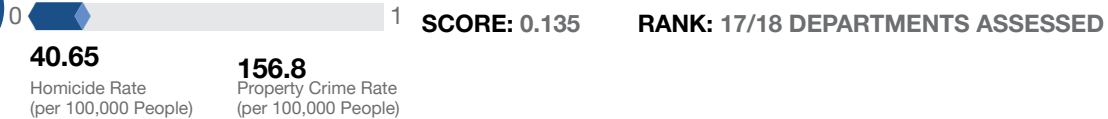
Economic Capacity



Governance



Crime Governance



Environmental Capacity



(COPING CAPACITY CONTINUED)



Infrastructure Capacity

0 1 **SCORE: 0.368** **RANK: 16/18 DEPARTMENTS ASSESSED**



Health Care Capacity **SCORE: 0.666** **RANK: 2/18 DEPARTMENTS ASSESSED**

21.49 Hospital Beds per 10,000 People	27.88 Physicians per 10,000 People	29.62 Nurses per 10,000 People	46,736.98 Average Distance to Nearest Hospital (km ²)	92.03% Vaccination Coverage	87.39% Access to Healthcare
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Transportation Capacity **SCORE: 0.000** **RANK: 18/18 DEPARTMENTS ASSESSED**

0.09 Road Density (km per sq. km)	131.13 Distance to Airport or Seaport (km)
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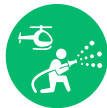
Communications Capacity **SCORE: 0.269** **RANK: 17/18 DEPARTMENTS ASSESSED**

93.3% Households with Mobile Phone	3.44% Households with Fixed Phone
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Energy Capacity **SCORE: 0.536** **RANK: 16/18 DEPARTMENTS ASSESSED**

94.16%
Households Connected to
Electric Grid



Disaster Management Capacity

0 1 **SCORE: 0.412** **RANK: 17/18 DEPARTMENTS ASSESSED**

40.65 Ambulances per 100,000 People	534.29 Distance to Fire Station	135.97 Distance to Warehouse
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RESILIENCE (R)

RANK: 18 / 18 DEPARTMENTS
SCORE: 0.326

Alto Paraguay's score and ranking are due to Very High Vulnerability combined with Very Low Coping Capacity scores.

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



**Information
Access
Vulnerability**



Gender Inequality



**Transportation
Capacity**



**Communications
Capacity**



HAZARD-SPECIFIC RISK (HSR)



Flood

RANK: 13
SCORE: 0.138



Drought

RANK: 18
SCORE: 0.000



Wildfire

RANK: 17
SCORE: 0.066



Extreme Cold

RANK: 8
SCORE: 0.142



Water Deficit

RANK: 14
SCORE: 0.086



Storm

RANK: 12
SCORE: 0.000



MULTI-HAZARD RISK (MHR)



15 / 18

Rank within departments
Score: 0.449

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

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



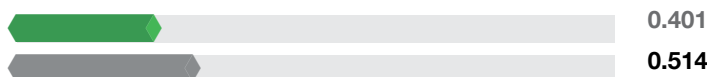
Multi-Hazard Exposure



Vulnerability



Coping Capacity



Department score
 Country score

ALTO PARAGUAY RECOMMENDATIONS

1

Information Access Vulnerability

Limitations in information access can impede a population's ability to receive, understand, and take action. Emergency messages must take into account the unique information access constraints of the district. Emergency messages presented to the population of Alto Paraguay must contain clear and simple information to ensure an appropriate response to save lives and reduce losses.

Alto Paraguay is ranked highest in the country for Access to Information Vulnerability. Findings show that only 7% of households have internet, which is the lowest in the country. Furthermore, only about 75% of households have televisions and/or radios. With limited economic capacity in the department, focus should be on bringing in NGO and private sector partnerships to establish lines of communication in advance of disasters. Emergency plans should be reviewed and incorporate alternative means of broadcasting information including sirens.

The illiteracy rate in Alto Paraguay is 14.9%, the highest percentage in the country. Additionally, the average years of schooling is 6.23, which ranked as the lowest in Paraguay. Educational initiatives should be focused in Alto Paraguay to increase the number of years students stay in school and to improve literacy rates. Invest in infrastructure and focus public awareness programs on increasing educational attainment of the population. Looking specifically at the location of schools in relation to populated areas, there is a clear gap in education facilities in the central and northern parts of Alto Paraguay. The data from Secretaría de Emergencia Nacional show that most of the schools in the department are located near the eastern and southeastern parts of the department.

ALTO PARAGUAY RECOMMENDATIONS

2

Gender Inequality

Marginalized populations are less likely to have their needs met under pre-disaster conditions, and therefore become even more susceptible to harm during times of disaster. Increase gender-based inclusion in all phases of DM, ensuring the implementation at the district and local levels. Course of action must recognize the role of women in society and support changes to policies and programs to promote gender-equal access.

The findings show that gender inequality is evident in both economic and educational achievements. The ratio of female to male income is 0.44 and the economic activity ratio is similarly 0.4, demonstrating that women on average make less and participate in the economy in a lesser extent than men. Focus efforts on empowering women to pursue gainful work. Continue to provide programs that equip women with the skills and knowledge they need to be able to obtain jobs that will allow for upward mobility. Investing in women to be a larger part of the workforce can help increase local revenue and boost economic capacity.

Access to information is also identified as a driver of vulnerability in Alto Paraguay, so increased efforts to provide equal opportunities in education is vital. The secondary enrollment ratio was ranked as the highest the country, which shows a high level of educational inequality. Fund programs to encourage young women to continue their education and to monitor the progress of student enrollment rates.

ALTO PARAGUAY RECOMMENDATIONS

3

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 Alto Paraguay's ability to distribute resources before, during, and after a disaster.

Alto Paraguay is ranked as the lowest department in Paraguay for Transportation Capacity. Road density is 0.09 kilometers per square kilometer of territory, which is the lowest in the country. Although Alto Paraguay is sparsely populated, limited transportation capacity may hamper emergency response activities and decrease public access to resources. Focus on ensuring transportation projects target areas that have the most limited transportation networks, including the northern and western areas.

Increased transportation networks can also bring economic benefits by enhancing access to markets. Economic benefits and enhanced emergency response operations should be the focus of enhancements to the transportation network in Alto Paraguay. Evacuation routes and emergency response plans should be adapted as construction is planned and implemented. Additionally, all construction projects need to be balanced with research and planners to ensure environmental impacts are mitigated.

ALTO PARAGUAY RECOMMENDATIONS

4

Communications Capacity

The density, diversity, resilience, and quality of communications infrastructure influence how department- and local-level populations able to facilitate effective and coordinated communication.

Continue to encourage programs that diversify the economy in Alto Paraguay to generate public revenue and create new job opportunities. Pursue policies that balance inflation rates and create equal opportunities for employment. Focus on ensuring that incomes grow equitably across the department and mirror achievements in economic growth.

Invest in programs to ensure marginalized groups, including women, are given equal opportunities to join the workforce and paid fair wages. By expanding advantageous job opportunities for women, the economy will benefit by boosting overall incomes and employment rates.

**Better solutions.
Fewer disasters.**

Safer world.

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