



**CABO VERDE**

**PAUL**

**NDPBA MUNICIPAL PROFILE**

# CABO VERDE PAUL



## ISLAND: SANTO ANTAO

Area: 54 km<sup>2</sup>

Paul is located on the northeast coast of the island of Santo Antão. It is one of three municipalities in Santo Antão which is the westernmost and second-largest island of Cabo Verde, and the largest of the Barlavento Islands group. The other two municipalities are Porto Novo and Ribeira Grande. Paul is the greenest municipality in the region with a beautiful landscape and rural culture yet faces development challenges related to infrastructure services (e.g., water and wastewater, solid waste disposal) and urban planning. Farming and livestock are the two main economic drivers. Subsistence farming includes maize, beans, sweet potatoes in high grounds, and sugar cane, bananas, and vegetables in the valleys. Periodic droughts impact Paul’s agriculture, resulting in low agricultural yields. Brandy and honey are the two main export products of the municipality.

## RISK AND VULNERABILITY COMPONENT SCORE



**MULTI-HAZARD RISK (MHR) - Very Low**  
Score: 0.377 • Rank: 18/22



**RESILIENCE (R) - Moderate**  
Score: 0.516 • Rank: 10/22



**MULTI-HAZARD EXPOSURE (MHE) - Very Low**  
Score: 0.162 • Rank: 20/22



**VULNERABILITY (V) - High**  
Score: 0.498 • Rank: 6/22



**COPING CAPACITY (CC) - High**  
Score: 0.530 • Rank: 7/22



Population (2020 projected)  
**5,382**



Infant mortality rate  
(per 1,000 live births)  
**0.0**



Poverty rate  
**44.5%**



Population with access  
to improved water  
**94.7%**



Average years of schooling  
**6.6**



## MULTI-HAZARD EXPOSURE (MHE)

RANK: 20 / 22 MUNICIPALITIES

SCORE: 0.162



MHE  
0.162

Raw MHE  
0.214

Relative MHE  
0.110

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



Drought

**5.8%**

326

\$25.4 Million

Critical Infrastructure Exposed:

19.0%



Flood

**3.2%**

179

-

Critical Infrastructure Exposed:

3.0%



Earthquake Induced Landslide

**11.5%**

641

-

Critical Infrastructure Exposed:

30.0%



Precipitation Induced Landslide

**36.7%**

2,053

\$25.4 Million

Critical Infrastructure Exposed:

50.0%



Volcano

**0.0%**

0

-

Critical Infrastructure Exposed:

0.0%



Forest Fire

**32.3%**

1,807

\$75.1 Million

Critical Infrastructure Exposed:

3.0%



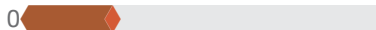
## VULNERABILITY (V)

**RANK: 6 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.498**

Vulnerability in Paul is primarily driven by Economic Constraints and Information Access Vulnerability. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.




### Environmental Stress

0  1 **SCORE: 0.244** **RANK: 16/22 MUNICIPALITIES ASSESSED**

<b>0.49</b> Livestock Density per Hectare	<b>27.1%</b> Households Using Firewood as Cooking Fuel	<b>0.3%</b> Loss in Tree Cover (2001 to 2020)
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### Vulnerable Health Status

0  1 **SCORE: 0.541** **RANK: 7/22 MUNICIPALITIES ASSESSED**

<b>0.0</b> Infant Mortality Rate (per 1,000 live births)	<b>13.3%</b> Disabled Population	<b>53.0</b> TB Prevalence per 100k Persons	<b>70.8</b> HIV Incidence per 100K Persons
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### Clean Water Vulnerability

0  1 **SCORE: 0.442** **RANK: 10/22 MUNICIPALITIES ASSESSED**

<b>18.0</b> Average Time to Collect Water for Household Use	<b>77.2%</b> Households with Access to Wastewater Services	<b>94.7%</b> Population with Access to Improved Water
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### Information Access Vulnerability

0  1 **SCORE: 0.627** **RANK: 6/22 MUNICIPALITIES ASSESSED**

<b>77.1%</b> Adult Literacy Rate	<b>6.6</b> Average Years of Schooling	<b>75.6%</b> Households with Television	<b>59.1%</b> Households with radio	<b>63.4%</b> Households with Internet access
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### Economic Constraints

0  1 **SCORE: 0.687** **RANK: 4/22 MUNICIPALITIES ASSESSED**

<b>0.56</b> Age dependency ratio	<b>0.43</b> Gini index	<b>6.9%</b> Unemployment Rate	<b>44.5%</b> Poverty rate	<b>5.3%</b> Households owning a vehicle
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### Gender Inequality

0  1 **SCORE: 0.578** **RANK: 6/22 MUNICIPALITIES ASSESSED**

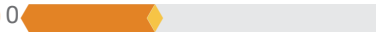
**38.5%**  
Female Seats  
Municipal City  
Council

**0.65**  
Female to male labor  
participants

**1.22**  
Parity in Secondary  
Education Enrollment



### Population Pressures

0  1 **SCORE: 0.366** **RANK: 20/22 MUNICIPALITIES ASSESSED**

**-2.31%**  
Average annual  
population  
change

**-19.29**  
Net Migration  
Rate (per 1,000  
persons)

**19.46**  
Youth Bulge



# COPING CAPACITY (CC)

**RANK: 7 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.530**

Paul exhibits weaker Coping Capacity in the areas of Communications Capacity and Health Care Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.



## Economic Capacity

0 1 **SCORE: 0.475** **RANK: 9/22 MUNICIPALITIES ASSESSED**

**49.42%** **7.43** **111,176**  
Economic Activity Rate Financial Service Locations per 10k Persons Avg Annual Expenditures per Capita CVE



## Governance

0 1 **SCORE: 0.729** **RANK: 3/22 MUNICIPALITIES ASSESSED**

**67%** **189.48** **72.0%**  
Population Properly Disposing Waste Crimes Reported per 10k persons Voter Participation Rate in Local Elections



## Environmental Capacity

0 1 **SCORE: 0** **RANK: 13/22 MUNICIPALITIES ASSESSED**

**0.00%**  
Protected Area



## Infrastructure Capacity

0 1 **SCORE: 0.562** **RANK: 9/22 MUNICIPALITIES ASSESSED**



## Health Care Capacity

**SCORE: 0.450** **RANK: 11/22 MUNICIPALITIES ASSESSED**

**3.37** **13.47** **97.3%** **0**  
Physicians per 10k Persons Nurses per 10k Persons Pct Under 1yr Fully Vaccinated Hospitals per 10k persons



## Transportation Capacity

**SCORE: 0.634** **RANK: 7/22 MUNICIPALITIES ASSESSED**

**2.82** **13.84**  
Road density (km per sq. km) Average Distance to Port Facility (km)



## Communications Capacity

**SCORE: 0.381** **RANK: 12/22 MUNICIPALITIES ASSESSED**

**20.8%** **62.4%**  
Households with Fixed Phones Population with Mobile Phone



## Energy Capacity

**SCORE: 0.653** **RANK: 9/22 MUNICIPALITIES ASSESSED**

**93.7%** **70.0%**  
Households with Access to Electricity Households with Access to Gas



## Emergency Services Capacity

**SCORE: 0.694** **RANK: 6/22 MUNICIPALITIES ASSESSED**

**7.97** **4.06** **14.86**  
Average Distance to Hospital (km) Average Distance to Police Station (km) Firefighters per 10,000 Persons



## RESILIENCE (R)

**RANK: 10 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.516**

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

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



**Economic Constraints**



**Information Access Vulnerability**



**Communications Capacity**



**Health Care Capacity**



## HAZARD-SPECIFIC RISK (HSR)



**Drought**

**RANK: 22 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.160**



**Flood**

**RANK: 6 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.169**



**Earthquake Induced Landslide**

**RANK: 7/22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.205**



**Precipitation Induced Landslide**

**RANK: 3/22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.308**



**Forest Fire**

**RANK: 11 / 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0.186**



**Volcano**

**RANK: 6/ 22 MUNICIPALITIES ASSESSED**  
**SCORE: 0**



## MULTI-HAZARD RISK (MHR)

**18 / 22**

RANK WITHIN MUNICIPALITIES  
Score: 0.377



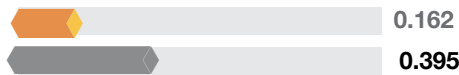
Paul's score and ranking are due to Very Low Multi-hazard Exposure combined with High Vulnerability and High Coping Capacity scores.

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

PAUL SCORE  
COUNTRY SCORE



#### Multi-Hazard Exposure



#### Vulnerability



#### Coping Capacity





## PAUL RECOMMENDATIONS

### 1

#### Economic Constraints

Paul ranks 4th highest for overall Economic Constraints, driven by the 3rd highest income inequality (Gini coefficient of 0.43), only 5.3% of households owning a vehicle, and nearly 45% of the population living in poverty. Families without a vehicle will be challenged to evacuate to safety when disasters strike. Identify vulnerable communities' transportation challenges and include strategies to support evacuation in municipal disaster plans. Assess disaster response and recovery plans to ensure that economically vulnerable populations are identified, as poor populations are often more likely to be severely impacted by disasters and have slower recovery times.

Economic constraints in Paul are closely linked to Information Access Vulnerability and vice versa. Removing economic barriers to education, and ensuring equitable access to schools, educational resources, and information technology will reduce vulnerability in the municipality.

Develop short- and long-term strategies to address and alleviate poverty. Short-term strategies may include public assistance programs that specifically address unsatisfied basic needs (i.e., food, water, housing, education). Over the long term, support government programs to assist in new business and employment opportunities. Linked economic development to national and municipal sustainable development goals to diversify livelihoods and promote equitable distribution of property and economic assets in Paul. Create public policies guaranteeing equal opportunity and fair wages for all. Focusing on sustainable economic opportunities will help to decrease long-term reliance on social assistance.

### 2

#### Information Access Vulnerability

Ranking 6th highest for overall Information Access Vulnerability, Paul ranks highest for adult illiteracy (77.1 %), and 3rd lowest for average years of schooling (6.6 years). Paul has some of the lowest percentages of households with access to television (75.6%) and internet services (63.4%).

Focus efforts on providing programs to increase school attendance and completion of secondary education. Work with communities to better understand the underlying factors that represent barriers to education and literacy. For example, economic constraints may contribute to disparities in information access.

Implement community outreach and education programs focused on hazard awareness, disaster preparedness, and health and safety practices to build community resilience. Include information and resources for audiences requiring special considerations such as the very young, elderly, and disabled populations. Boost public-private collaboration and coordination to ensure that hazard warning information is accessible and disseminated as broadly as possible through multiple communications channels.

## PAUL RECOMMENDATIONS

### 3

#### Communications Capacity

Paul's overall Communications Capacity ranking is constrained by having the 7th lowest percentage of the population with mobile phones (62%) and approximately 21% of households with fixed phones. Limited communications capacity exacerbates information access vulnerability and hinders the ability of government agencies to share critical information during disasters.

Boost Communications Capacity and overall resilience through the expansion of infrastructure to ensure coverage, accessibility, and reliability of communications during disasters. Encourage telecommunications infrastructure development at a sustainable pace and implement risk reduction measures in all infrastructure enhancements to protect against hazard impacts. Create communications plans to share critical information with the public during disasters, leveraging multimodal communication strategies (radio, internet, television, fixed- and mobile telephone).

### 4

#### Health Care Capacity

Paul's overall Health Care Capacity ranking is constrained by its lack of hospital services and limited numbers of health care personnel (3.37 physicians and 13.5 nurses) per 10,000 persons. Paul has one public healthcare center, albeit with limited capacity. This hospital unit does not have a laboratory or radiology service, so patients are referred to the Regional Hospital of Ribeira Grande.

With limited access to healthcare, and limited hospital beds and medical staff, the municipality is not equipped to handle disease outbreaks or mass casualty events. Paul is susceptible to landslide, forest fire, flood, and drought. Ensuring that the health care system can meet the needs of vulnerable and exposed populations is vital to protect lives.

In light of existing economic constraints, expanded partnerships with NGOs, private sector, and regional and international donor agencies may be needed to expand health care infrastructure, hospital capabilities, and skilled medical staff in the municipality. Incentivizing employment in the health care sector, especially in vulnerable rural communities, will enhance equitable access to health care in Paul. While encouraging long-term expansion of the health care system, support underserved communities by developing a program for visiting medical practitioners to increase access to preventive and acute care in the municipality.

**Better solutions.  
Fewer disasters.**

# Safer world.

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