PANAMA PROVINCE RISK PROFILES
SUBNATIONAL ASSESSMENT RESULTS
PANAMÁ
BOCAS DEL TORO
NDPBA PROVINCES AND INDIGENOUS COMARCAS
PROFILE
PANAMÁ
BOCAS DEL TORO

CAPITAL: BOCAS DEL TORO

Area: 4,657 km²

The Bocas del Toro province is located in the western region of Panama. This Province is divided into 4 districts: Bocas del Toro (The Capital), Almirante, Changuinola and Chiriquí Grande. The province borders Caribbean Sea to the North, Costa Rica to the west, Chiriquí Province to the south, and Ngäbe Buglé. The main economic sources are cattle, banana and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - High**
Score: 0.548 • Rank: 4/13

**RESILIENCE (R) - Low**
Score: 0.471 • Rank: 9/13

**MULTI-HAZARD EXPOSURE (MHE) - Medium**
Score: 0.586 • Rank: 6/13

**VULNERABILITY (V) - Medium**
Score: 0.510 • Rank: 5/13

**COPING CAPACITY (CC) - Low**
Score: 0.453 • Rank: 9/13

Population (2020 Estimate)
179,990

Population in poverty
43.8%

Average years in school
8.2

Households with access to improved water
8.4% households

Infant mortality rate (per 1,000 live births)
25

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 6 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.586

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- **Earthquake**: 2.3% (3,602)
- **Landslide**: 0.2% (268)
- **Sea Level Rise**: 54.1% (83,983)
- **Tsunami**: 0.7% (1,045)
- **Flood**: 32.3% (50,111)
- **Storm Surge**: 2.6% (4,038)
- **Wildfire**: 0%
VULNERABILITY (V)

Vulnerability in Bocas del Toro is primarily driven by Population Pressures and Clean Water Access Vulnerability. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  SCORE: 0.177  RANK: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Percent forest cover lost: 0.06%
- Density of livestock per sq. km: 48.71
- Percent of freshwater consumption to production: 33.8%

Vulnerable Health Status  SCORE: 0.596  RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Dengue incidence per 100,000 persons: 420.8
- AIDS incidence per 100,000 persons: 3
- Malaria Incidence per 100,000 persons: 0.6
- TB incidence per 100,000 persons: 82.1
- Prevalence of stunting: 27.7%
- Disability: 2.8%
- Maternal Mortality Rate per 100,000 live births: 67.46
- Infant mortality per 1,000 live births: 24.51
- Life expectancy: 73.79

Clean Water Vulnerability  SCORE: 0.629  RANK: 4/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households without access to improved drinking water: 8.4%
- Households with access to improved sanitation: 73.7%

Information Access Vulnerability  SCORE: 0.521  RANK: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with radio: 49.2%
- Households with TV: 77.9%
- Households with internet: 52.9%
- School attendance rate: 76.8%
- Average years of schooling: 8.17
- Illiteracy rate: 8.5%
**Economic Constraints**  
SCORE: 0.540  
RANK: 4/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED  
- 43.8% Poverty rate  
- 0.71 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.392  
RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED  
- 0.03 Ratio female to male secondary enrollment  
- 0.35 Ratio female to male labor  
- 0.11 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.718  
RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED  
- 5.2% Average annual urban population change  
- 3.1% Percent average population change
Bocas del Toro exhibits weaker Coping Capacity in the areas of Economic Capacity and Governance. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

### Economic Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal income per capita</td>
<td>34.33</td>
<td></td>
</tr>
<tr>
<td>Median monthly salary</td>
<td>541.73</td>
<td></td>
</tr>
<tr>
<td>GDP per capita</td>
<td>3,107</td>
<td></td>
</tr>
</tbody>
</table>

### Governance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with public garbage</td>
<td>28.1%</td>
<td></td>
</tr>
<tr>
<td>Crime rate per 1,000 people</td>
<td>11.1</td>
<td></td>
</tr>
<tr>
<td>Crime syndicate per 1,000 people</td>
<td>2.55</td>
<td></td>
</tr>
<tr>
<td>Voter participation percentage</td>
<td>67.6%</td>
<td></td>
</tr>
</tbody>
</table>

### Environmental Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected area percentage</td>
<td>89.0%</td>
<td></td>
</tr>
<tr>
<td>Reforested area percentage</td>
<td>7.0%</td>
<td></td>
</tr>
</tbody>
</table>

### Infrastructure Capacity

<table>
<thead>
<tr>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
</table>

### Health Care Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses per 10,000 people</td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>Physicians per 10,000 people</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td>Hospital beds per 10,000 people</td>
<td>17.3</td>
<td></td>
</tr>
<tr>
<td>DPT3 immunization coverage</td>
<td>76.2%</td>
<td></td>
</tr>
<tr>
<td>Average distance to hospital</td>
<td>8.1</td>
<td></td>
</tr>
</tbody>
</table>

### Transportation Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance to port or airport (km)</td>
<td>6.02</td>
<td>6/13</td>
</tr>
<tr>
<td>Road density (km)</td>
<td>0.1</td>
<td></td>
</tr>
</tbody>
</table>

### Communications Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with fixed phone</td>
<td>12.3%</td>
<td>9/13</td>
</tr>
<tr>
<td>Households with mobile phone</td>
<td>82.4%</td>
<td></td>
</tr>
</tbody>
</table>

### Energy Capacity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Score</th>
<th>RANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent household connected to public electricity grid</td>
<td>60.8%</td>
<td>9/13</td>
</tr>
</tbody>
</table>
RESILIENCE (R)

Bocas del Toro’s score and ranking are due to Medium Vulnerability combined with Low Coping Capacity scores.

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

- Population Pressures
- Clean Water Access Vulnerability
- Economic Capacity
- Governance

HAZARD-SPECIFIC RISK (HSR)

<table>
<thead>
<tr>
<th>Event</th>
<th>RANK:</th>
<th>PROVINCES AND INDIGENOUS COMARCAS ASSESSED</th>
<th>SCORE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>9 / 13</td>
<td></td>
<td>0.096</td>
</tr>
<tr>
<td>Flood</td>
<td>1 / 13</td>
<td></td>
<td>0.529</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>1 / 13</td>
<td></td>
<td>0.474</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>2 / 13</td>
<td></td>
<td>0.350</td>
</tr>
<tr>
<td>Landslide</td>
<td>11 / 13</td>
<td></td>
<td>0.065</td>
</tr>
<tr>
<td>Wildfire</td>
<td>11 / 13</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>Tsunami</td>
<td>7 / 13</td>
<td></td>
<td>0.173</td>
</tr>
</tbody>
</table>
Bocas del Toro's score and ranking are due to Medium Multi-hazard Exposure combined with Medium Vulnerability and Low Coping Capacity scores.

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

- Multi-Hazard Exposure
  - Bocas del Toro: 0.510
  - Country: 0.504
- Vulnerability
  - Bocas del Toro: 0.474
  - Country: 0.447
- Coping Capacity
  - Bocas del Toro: 0.453
  - Country: 0.474
BOCAS DEL TORO RECOMMENDATIONS

1 Population Pressures

Bocas del Toro ranks second in population pressures only behind Ngäbe Buglé and experiences a 5.19% annual population change. Population growth increases stress on public utilities, emergency services, and health care. An increase in these decreases the ability for governments to respond adequately to disasters and mass casualties with already limited resources. The migration of large populations leads to strain on social services, economic opportunities, and health care access. Lack of economic opportunity can potentially cause increased criminal activity, increased nutrition needs for vulnerable populations (i.e., elderly and adolescents), and lack of adequate shelter for individuals.

Given that Bocas del Toro ranks sixth highest in overall Multi-Hazard Exposure, monitor population growth to ensure policy, plans, and programs meet requirements to respond to mass casualties and disasters. Ensure population growth and migration remain at a stable and sustainable level. Identify causes and drivers of migration for large populations to address needs and limit forced migration. Ensure a comprehensive understanding of population change across the country to meet public safety needs and requirements.
BOCAS DEL TORO RECOMMENDATIONS

Clean Water Access Vulnerability

Bocas del Toro ranks fourth in Panama for Clean Water Access Vulnerability, with high access to improved sanitation. A lack of access to improved water sources and improved sanitation can lead to contracting enteric diseases from contaminated water supplies and increases the risk of the population facing an acute enteric disease outbreak. Water contamination and disease outbreaks exacerbate existing vulnerabilities and hazard exposures, and stress sometimes limits local health care resources. Lack of clean water in specific environments can quickly lead to a mass casualty situation needing national-level resources and external assistance to ensure a population has clean drinking water necessary for survival.

Invest in the development and water treatment and water distribution systems to ensure populations have access to clean water and adequate sanitation services. Develop an emergency action plan to identify and prevent acute enteric disease outbreaks can prevent community spread and isolate sources of contaminated water or inadequate sanitation.
Economic Capacity

Bocas del Toro has the second lowest GDP per capita rankings when compared to the rest of Panama. The median salary of individuals in the province also ranks ninth in the country. Socioeconomic deprivation increases dependency on limited government resources and individuals and limits economic opportunity and mobility. A more consequential situation for socioeconomic deprivation is unchecked and forced migration of large populations, potentially creating immediate instability within civil society. As noted in the vulnerability results for Bocas del Toro, it ranks the highest in overall population pressures in Panama. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and the standing government.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all. Identify drivers of poverty and criminal activity to address opportunities for strained populations within civil society.
BOCAS DEL TORO RECOMMENDATIONS

Governance

Bocas del Toro ranks eighth in overall Governance. Voter participation is the lowest of all provinces in Panama, suggesting a possible challenge for governance and elections. Reduced governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations. Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity.

Develop methods for measures of performance and measures of effectiveness to utilize limited government resources best. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society. Provide and integrate civic education to address government distrust and encourage participation in elections.
PANAMÁ
CHIRIQUÍ

CAPITAL: DAVID

Area: 6,491 km²

The Chiriquí province is located in the western region of Panama. This Province is divided into 13 districts: David (The Capital), Alanje, Barú, Boquerón, Boquete, Bugaba, Dolega, Gualaca, Remedios, Renacimiento, San Félix, San Lorenzo, Tierras Altas and Tolé. The province borders Bocas del Toro and Ngäbe Buglé to the west, Costa Rica to the North, Veraguas to the east and the Pacific Ocean to the south. The main economic sources are cattle, coffee, banana and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR) - Very Low**
  - Score: 0.386 • Rank: 12/13

- **RESILIENCE (R) - Medium**
  - Score: 0.573 • Rank: 5/13

- **MULTI-HAZARD EXPOSURE (MHE) - Very Low**
  - Score: 0.303 • Rank: 12/13

- **VULNERABILITY (V) - Very Low**
  - Score: 0.365 • Rank: 10/13

- **COPING CAPACITY (CC) - Medium**
  - Score: 0.510 • Rank: 7/13

*For more information on data and components please visit: https://bit.ly/2LqYoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 12 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.303

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- Earthquake: 1.2% (5,660 persons)
- Landslide: 0.6% (3,013 persons, 77.1 million)
- Sea Level Rise: 18.4% (85,591 persons, 1.8 billion)
- Tsunami: 1.6% (7,247 persons, 5.7 thousand)
- Flood: - (0 persons)
- Storm Surge: 0.3% (1,304 persons, 28.1 million)
- Wildfire: 9.1% (42,508 persons, 493.8 million)
VULNERABILITY (V)

Vulnerability in Chiriquí is primarily driven by Gender Inequality and Environmental Stress. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  SCORE: 0.584  RANK: 4/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.09% Percent forest cover lost
- 113.54 Density of livestock per sq. km
- 57.6% Percent of freshwater consumption to production

Vulnerable Health Status  SCORE: 0.321  RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 17.1 Dengue incidence per 100,000 persons
- 12.3 AIDS incidence per 100,000 persons
- 0.7 Malaria Incidence per 100,000 persons
- 23.2 TB incidence per 100,000 persons
- 11.0% Prevalence of stunting
- 3.6% Disability
- 11.54 Maternal Mortality Rate per 100,000 live births

Clean Water Vulnerability  SCORE: 0.257  RANK: 9/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 4.8% Households without access to improved drinking water
- 99.1% Households with access to improved sanitation

Information Access Vulnerability  SCORE: 0.250  RANK: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 79.1% Households with radio
- 92.8% Households with TV
- 66.6% Households with internet
- 79.6% School attendance rate
- 9.39 Average years of schooling
- 4.7% Illiteracy rate
**PROVINCE PROFILE**

**Economic Constraints**

- **SCORE: 0.276**
- **RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- 20.0% Poverty rate
- 0.61 Economic dependency ratio

**Gender Inequality**

- **SCORE: 0.756**
- **RANK: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- 0.18 Ratio female to male secondary enrollment
- 0.41 Ratio female to male labor
- 0.09 Proportion of female seats in local government

**Population Pressures**

- **SCORE: 0.111**
- **RANK: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- 3.0% Average annual urban population change
- 0.7% Percent average population change
**COPING CAPACITY (CC)**

Chiriquí exhibits weaker Coping Capacity in the areas of Governance and Economic Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

### Economic Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal income per capita (thousands of Balboas)</td>
<td>50.39</td>
<td>07/13</td>
</tr>
<tr>
<td>Median monthly salary (Balboas)</td>
<td>611.52</td>
<td>05/13</td>
</tr>
<tr>
<td>GDP per capita (Balboas)</td>
<td>3,282</td>
<td>05/13</td>
</tr>
</tbody>
</table>

### Governance

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with public garbage collection</td>
<td>13.1%</td>
<td>05/13</td>
</tr>
<tr>
<td>Crime rate per 1,000 people</td>
<td>10.47</td>
<td>07/13</td>
</tr>
<tr>
<td>Crime syndicate per 1,000 people</td>
<td>6.12</td>
<td>07/13</td>
</tr>
<tr>
<td>Voter participation percentage</td>
<td>73.0%</td>
<td>07/13</td>
</tr>
</tbody>
</table>

### Environmental Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected area percentage</td>
<td>8.8%</td>
<td>07/13</td>
</tr>
<tr>
<td>Reforested area percentage</td>
<td>26.2%</td>
<td>07/13</td>
</tr>
</tbody>
</table>

### Infrastructure Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
</table>

### Health Care Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses per 10,000 people</td>
<td>20.6</td>
<td>06/13</td>
</tr>
<tr>
<td>Physicians per 10,000 people</td>
<td>17.1</td>
<td>06/13</td>
</tr>
<tr>
<td>Hospital beds per 10,000 people</td>
<td>37.5</td>
<td>06/13</td>
</tr>
<tr>
<td>DPT3 immunization coverage</td>
<td>91.5%</td>
<td>06/13</td>
</tr>
<tr>
<td>Average distance to hospital (km)</td>
<td>18.66</td>
<td>06/13</td>
</tr>
</tbody>
</table>

### Transportation Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance to port or airport (km)</td>
<td>12.7</td>
<td>06/13</td>
</tr>
<tr>
<td>Road density (km)</td>
<td>0.49</td>
<td>06/13</td>
</tr>
</tbody>
</table>

### Communications Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with fixed phone</td>
<td>15.3%</td>
<td>06/13</td>
</tr>
<tr>
<td>Households with mobile phone</td>
<td>89.4%</td>
<td>06/13</td>
</tr>
</tbody>
</table>

### Energy Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent household connected to public electricity grid</td>
<td>87.1%</td>
<td>06/13</td>
</tr>
</tbody>
</table>
RESILIENCE (R)

Chiriquí’s score and ranking are due to Very Low Vulnerability combined with Medium Coping Capacity scores.

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

<table>
<thead>
<tr>
<th>Theme</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Inequality</td>
<td>6</td>
<td>0.174</td>
</tr>
<tr>
<td>Environmental Stress</td>
<td>4</td>
<td>0.230</td>
</tr>
<tr>
<td>Governance</td>
<td>4</td>
<td>0.253</td>
</tr>
<tr>
<td>Economic Capacity</td>
<td>7</td>
<td>0.223</td>
</tr>
</tbody>
</table>

HAZARD-SPECIFIC RISK (HSR)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>10</td>
<td>0.079</td>
</tr>
<tr>
<td>Flood</td>
<td>12</td>
<td>0.000</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>4</td>
<td>0.253</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>4</td>
<td>0.223</td>
</tr>
<tr>
<td>Landslide</td>
<td>6</td>
<td>0.174</td>
</tr>
<tr>
<td>Wildfire</td>
<td>7</td>
<td>0.230</td>
</tr>
<tr>
<td>Tsunami</td>
<td>4</td>
<td>0.194</td>
</tr>
</tbody>
</table>
Chiriquí’s score and ranking are due to Very Low Multi-hazard Exposure combined with Very Low Vulnerability and Medium Coping Capacity scores.

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

1

Gender Inequality

Chiriquí ranks 5th in overall Gender inequality, driven primarily by gender disparities in labor participation, and limited female representation in government.

Boost labor participation by promoting workforce opportunities for women that includes provisions for family support, such as quality, affordable childcare. Support equal pay for equal work to foster economic growth and reduce economic dependency.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
CHIRIQUÍ RECOMMENDATIONS

Environmental Stress

Climate change, freshwater withdrawals, and forest cover loss contribute to food insecurity, unhabitable environments, internally displaced people, forced migration, and economic upheaval. Combined with a possible increased dependency due to gender inequality in Chiriquí, it can further poverty and disparity among citizens. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development. Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Food security and access to a clean water supply are highly dependent on land use governance, sustainable development, and planning.

Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce in agrarian societies. Early identification of future development of industrial areas or agricultural areas allows studies to understand the impact on populations dependent on clean water and food resources. Provide educational training to both private and public entities to educate on sustainable development and develop sustainable metrics, ensuring that overdevelopment does not occur and that populations continue to have their food and water needs met.
CHIRIQUIÍ RECOMMENDATIONS

Governance

Chiriquí ranks third lowest in overall Governance, with a crime rate of approximately 11 per 1,000 people, and a voter participation rate of 73%. Limitations in governance undermine stability for civil society creating further stress among disparate and disadvantaged populations.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity to lower the crime rate per 1,000 people.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
CHIRIQUÍ RECOMMENDATIONS

Economic Capacity

Low median monthly salaries, low municipal income, low GDP per capita are drivers of low economic capacity in Chiriquí, contributing to socioeconomic deprivation to certain members of society. Socioeconomic deprivation increases dependency on limited government resources and individuals and limits economic opportunity and mobility. A more consequential situation for socioeconomic deprivation is unchecked and forced migration of large populations, potentially creating immediate instability within civil society. With Chiriquí already experiencing challenges in governance, limited economic capacity can worsen criminal activity and strain limited government resources. Lack of economic ability increases illegal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and the standing government.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all. Identify drivers of poverty and criminal activity to address opportunities for strained populations within civil society.
COCLÉ

NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE

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PANAMÁ COCLÉ

CAPITAL: PENONOMÉ

Area: 4,947 km²

The Coclé province is located in the central region of Panama. This Province is divided into 6 districts: Penonomé (The Capital), Aguadulce, Antón, La Pintada, Natá and Olá. The province borders Pacific Ocean and Herrera to the south, Colón to the north, Veraguas to the west and Panamá Oeste to the east. The main economic sources are cattle, coffee and banana.

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - Low**
Score: 0.434  •  Rank: 9/13

**RESILIENCE (R) - Medium**
Score: 0.566  •  Rank: 7/13

**MULTI-HAZARD EXPOSURE (MHE) - Low**
Score: 0.435  •  Rank: 10/13

**VULNERABILITY (V) - Low**
Score: 0.385  •  Rank: 9/13

**COPING CAPACITY (CC) - Medium**
Score: 0.518  •  Rank: 6/13

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

- Population (2020 Estimate) **266,969**
- Population in poverty **26.6%**
- Average years in school **8.8**
- Households with access to improved water **4.9% households**
- Infant mortality rate (per 1,000 live births) **13**
MULTI-HAZARD EXPOSURE (MHE)

RANK: 10 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.435

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

**Earthquake**
- 0

**Landslide**
2.2%
- 5,833
- 42 Million

**Sea Level Rise**
12.0%
- 31,607
- 1.5 Billion

**Tsunami**
1.8%
- 4,725
- 

**Flood**
1.6%
- 4,269
- 526.5 Million

**Storm Surge**
0.3%
- 776
- 6.5 Million

**Wildfire**
26.0%
- 68,586
- 3.3 Billion

MHE
- Raw MHE: 0.601
- Relative MHE: 0.269

National Disaster Preparedness Baseline Assessment: Panamá
**VULNERABILITY (V)**

Vulnerability in Coclé is primarily driven by Gender Inequality and Environmental Stress. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

### Environmental Stress

- **Score**: 0.420
- **Rank**: 8/13 Provinces and Indigenous Comarcas Assessed

- **Percent forest cover lost**: 0.15%
- **Density of livestock per sq. km**: 57.26
- **Percent of freshwater consumption to production**: 90.2%

### Vulnerable Health Status

- **Score**: 0.360
- **Rank**: 9/13 Provinces and Indigenous Comarcas Assessed

- **Dengue incidence per 100,000 persons**: 147.7
- **AIDS incidence per 100,000 persons**: 1.5
- **Malaria Incidence per 100,000 persons**: 0
- **TB incidence per 100,000 persons**: 10.7
- **Prevalence of stunting**: 9.9%
- **Disability**: 3.6%
- **Maternal Mortality Rate per 100,000 live births**: 46.26
- **Life expectancy**: 77.49
- **Infant mortality per 1,000 live births**: 13.19

### Clean Water Vulnerability

- **Score**: 0.374
- **Rank**: 7/13 Provinces and Indigenous Comarcas Assessed

- **Households without access to improved drinking water**: 4.9%
- **Households with access to improved sanitation**: 96.1%

### Information Access Vulnerability

- **Score**: 0.338
- **Rank**: 8/13 Provinces and Indigenous Comarcas Assessed

- **Households with radio**: 69.9%
- **Households with TV**: 85.0%
- **Households with internet**: 55.8%
- **School attendance rate**: 79.8%
- **Average years of schooling**: 8.75
- **Illiteracy rate**: 2.8%
**Provincial Profile**

**Economic Constraints**
- **Score:** 0.262
- **Rank:** 8/13 Provinces and Indigenous Comarcas Assessed

26.6% Poverty rate
0.56 Economic dependency ratio

**Gender Inequality**
- **Score:** 0.761
- **Rank:** 4/13 Provinces and Indigenous Comarcas Assessed

0.25 Ratio female to male secondary enrollment
0.34 Ratio female to male labor
0.16 Proportion of female seats in local government

**Population Pressures**
- **Score:** 0.181
- **Rank:** 9/13 Provinces and Indigenous Comarcas Assessed

3.4% Average annual urban population change
0.9% Percent average population change
Coclé exhibits weaker Copping Capacity in the areas of Economic Capacity and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Copping Capacity score.
RESILIENCE (R)

Coclé’s score and ranking are due to Low Vulnerability combined with Medium Coping Capacity scores.

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

- **Gender Inequality**
  - Rank: 7 / 13
  - Score: 0.566

- **Environmental Stress**
  - Rank: 3 / 13
  - Score: 0.367

- **Economic Capacity**
  - Rank: 6 / 13
  - Score: 0.176

- **Transportation Capacity**
  - Rank: 9 / 13
  - Score: 0.211

HAZARD-SPECIFIC RISK (HSR)

<table>
<thead>
<tr>
<th>Event</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>11</td>
<td>0.000</td>
</tr>
<tr>
<td>Flood</td>
<td>5</td>
<td>0.215</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>9</td>
<td>0.211</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>8</td>
<td>0.190</td>
</tr>
<tr>
<td>Landslide</td>
<td>4</td>
<td>0.196</td>
</tr>
<tr>
<td>Wildfire</td>
<td>3</td>
<td>0.367</td>
</tr>
<tr>
<td>Tsunami</td>
<td>6</td>
<td>0.176</td>
</tr>
</tbody>
</table>
Coclé’s score and ranking are due to Low Multi-hazard Exposure combined with Low Vulnerability and Medium Coping Capacity scores.
COCLÉ RECOMMENDATIONS

1 Gender Inequality

Coclé ranks seventh in overall Gender Inequality in Panama. Similar to other provinces across the country, a greater proportion of females than males attend secondary school (1.25 ratio of females to males), the rate of female participation in the labor force is lower than their male counterparts, and female representation in local government is limited.

Populations with women who are less economically active or economically dependent on men for livelihood exacerbate population pressures and create further strain in civil society. Population increases create additional competition in the workforce, and a lack of targeted interventions to ensure women’s participation can increase gender inequality created a more significant disparity between women and men.

Create targeted interventions to increase workforce populations for females through training women with the necessary skills to participate in the economy. Explore incentive-based initiatives to encourage employers to hire women and other marginalized groups. Identify drivers that marginalize women and girls to create targeted interventions to reduce inequality and increase the quality of life for all.
COCLÉ RECOMMENDATIONS

Environmental Stress

Climate change, freshwater withdrawals, and forest cover loss contribute to food insecurity, unhabitable environments, internally displaced people, forced migration, and economic upheaval. Coclé suffers from a higher-than-average loss of forest coverage contributing to high environmental stress. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development. Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Food security and access to the clean water supply are highly dependent on land use governance, sustainable development, and planning.

Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce in agrarian societies. Early identification of the future for the development of industrial or agricultural areas allows studies to understand the impact on populations dependent on clean water and food resources. Provide educational training to both private and public entities to educate on sustainable development and develop sustainable metrics, ensuring that overdevelopment does not occur and that populations continue to have their food and water needs met.
Economic Capacity

Socioeconomic deprivation increases dependency on limited government resources and individuals and limits economic opportunity and mobility. Gender inequality in Coclé can further stress the economic capacity of the province. Lack of economic ability increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and highlights relationships between individuals and civil society.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all.

Create targeted interventions to increase workforce populations for females through training women with the necessary skills to participate in the economy. Explore incentive-based initiatives to encourage employers to hire women and other marginalized groups. Identify drivers that marginalize women and girls to create targeted interventions to reduce inequality and increase the quality of life for all.
Transportation Capacity

Limited transportation capacity within a province limits the economic opportunity and mobility of society, and it limits the opportunity for individuals to attend higher education and find gainful employment. Reduced transportation capacity can also hamper emergency response activities and decrease public access to vital resources such as adequate healthcare and food.

Identify areas with limited transportation opportunities to identify the best project areas where increasing transportation capacity has the highest impact. Identify emergency routes and vital transportation routes that provide critical access to services to the population. Ensure new transportation routes are developed within sustainable development guidelines with proper materials.
PROVINCE PROFILE

PANAMÁ
COLÓN

CAPITAL: COLÓN

Area: 4,576 km²

The Colón province is located in the central region of Panama. This Province is divided into 6 districts: Colón (The Capital), Chagres, Donoso, Omar Torrijos Herrera, Portobelo and Santa Isabel. The province borders Atlantic Ocean to the north, Veraguas to the west, Coclé, Panamá Oeste and Panamá to the south and Kuna Yala to the east. The main economic sources are cattle and banana.

RISK AND VULNERABILITY
COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - Medium**
Score: 0.496 • Rank: 6/13

**RESILIENCE (R) - High**
Score: 0.593 • Rank: 4/13

**MULTI-HAZARD EXPOSURE (MHE) - High**
Score: 0.675 • Rank: 3/13

**VULNERABILITY (V) - High**
Score: 0.392 • Rank: 7/13

**COPING CAPACITY (CC) - High**
Score: 0.579 • Rank: 4/13

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

Population (2020 Estimate) 298,344
Population in poverty 14.6%
Average years in school 9.9
Households with access to improved water 5.6% households
Infant mortality rate (per 1,000 live births) 15
MULTI-HAZARD EXPOSURE (MHE)

RANK: 3 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.675

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- Earthquake
  - 0
  -

- Landslide
  - 248
  - 3.7 Million

- Sea Level Rise
  - 123,967
  - 5.5 Billion

- Flood
  - 2,300
  -

- Storm Surge
  - 2,727
  - 0 Million

- Wildfire
  - 88,057
  - 6.1 Billion

- Tsunami
  - 1,129
  -
VULNERABILITY (V)

Vulnerability in Colón is primarily driven by Gender Inequality and Environmental Stress. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  
SCORE: 0.562  
RANK: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.17% Percent forest cover lost
- 68.2 Density of livestock per sq. km
- 140.2% Percent of freshwater consumption to production

Vulnerable Health Status  
SCORE: 0.371  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 105.5 Dengue incidence per 100,000 persons
- 25.9 AIDS incidence per 100,000 persons
- 0.4 Malaria Incidence per 100,000 persons
- 42.7 TB incidence per 100,000 persons
- 9.3% Prevalence of stunting
- 1.9% Disability
- 36.81 Maternal Mortality Rate per 100,000 live births
- 14.54 Infant mortality per 1,000 live births
- 75.65 Life expectancy

Clean Water Vulnerability  
SCORE: 0.337  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 5.6% Households without access to improved drinking water
- 97.9% Households with access to improved sanitation

Information Access Vulnerability  
SCORE: 0.287  
RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 64.8% Households with radio
- 91.3% Households with TV
- 60.5% Households with internet
- 78.2% School attendance rate
- 9.88 Average years of schooling
- 1.5% Illiteracy rate
**Economic Constraints**  
SCORE: 0.217  
RANK: 9/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 14.6% Poverty rate
- 0.59 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.698  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.25 Ratio female to male secondary enrollment
- 0.3 Ratio female to male labor
- 0.07 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.275  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 3.0% Average annual urban population change
- 1.6% Percent average population change
Colón exhibits weaker Coping Capacity in the areas of Governance and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**  
.Score: 0.818  
.Rank: 2/13

- **2019 Municipal income per capita (thousands of Balboas):** 72.7
- **2018 Median monthly salary (Balboas):** 683.63
- **2019 GDP per capita (Balboas):** 22,274

**Governance**  
.Score: 0.277  
.Rank: 12/13

- **2019 Households with public garbage collection:** 6.4%
- **2017 Crime rate per 1,000 people:** 11.54
- **2018 Crime syndicate per 1,000 people:** 4.48
- **2018 Voter participation percentage:** 70.1%

**Environmental Capacity**  
.Score: 0.482  
.Rank: 3/13

- **2019 Protected area percentage:** 68.5%
- **2017 Reforested area percentage:** 5.6%

**Infrastructure Capacity**  
.Score: 0.673  
.Rank: 6/13

**Health Care Capacity**  
.Score: 0.494  
.Rank: 7/13

- **2018 Nurses per 10,000 people:** 10.5
- **2017 Physicians per 10,000 people:** 9.7
- **2016 Hospital beds per 10,000 people:** 27.3
- **2018 DPT3 immunization coverage:** 78.6%
- **2019 Average distance to hospital (km):** 10.85

**Transportation Capacity**  
.Score: 0.477  
.Rank: 9/13

- **2018 Average distance to port or airport (km):** 11.67
- **2017 Road density (km):** 0.17

**Communications Capacity**  
.Score: 0.785  
.Rank: 3/13

- **2018 Households with fixed phone:** 22.9%
- **2017 Households with mobile phone:** 92.6%

**Energy Capacity**  
.Score: 0.936  
.Rank: 4/13

- **2018 Percent household connected to public electricity grid:** 91.4%
Colón’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:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Rank</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Gender Inequality</td>
<td>9</td>
<td>0.076</td>
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<tr>
<td>Environmental Stress</td>
<td>5</td>
<td>0.117</td>
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<tr>
<td>Governance</td>
<td>8</td>
<td>0.269</td>
</tr>
<tr>
<td>Transportation Capacity</td>
<td>7</td>
<td>0.396</td>
</tr>
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</table>

**HAZARD-SPECIFIC RISK (HSR)**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>11</td>
<td>0.000</td>
</tr>
<tr>
<td>Flood</td>
<td>11</td>
<td>0.076</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>2</td>
<td>0.364</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>12</td>
<td>0.109</td>
</tr>
<tr>
<td>Landslide</td>
<td>9</td>
<td>0.117</td>
</tr>
<tr>
<td>Wildfire</td>
<td>2</td>
<td>0.396</td>
</tr>
<tr>
<td>Tsunami</td>
<td>12</td>
<td>0.069</td>
</tr>
</tbody>
</table>
Colón’s score and ranking are due to High Multi-hazard Exposure combined with High Vulnerability and High Coping Capacity scores.
COLÓN RECOMMENDATIONS

1 Gender Inequality

Colón ranks 4th in overall Gender Inequality in Panama. While a greater proportion of females than males attend secondary school (1.25 ratio of females to males), the rate of female participation in the labor force is far lower than their male counterparts.

Boost labor participation by promoting workforce opportunities for women that include provisions for family support, such as quality, affordable childcare. Support equal pay for equal work to foster economic growth and reduce economic dependency.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
Environmental Stress

Climate change and unsustainable development contribute to increased hazard exposure, food insecurity, uninhabitable environments, internally displaced people, forced migration, and economic upheaval. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development. The province suffers from a high percentage of deforestation. Environmental protection is vital to ensuring sustainable development within the region and country. Land management use is essential to monitor ecological stress while balancing economic benefits closely. Food security and access to a clean water supply are highly dependent on land use governance, sustainable development, and planning. Given that Colón province has the third highest overall Multi-Hazard Exposure in the country, monitoring and reducing environmental stress represents a priority for mitigating disaster impacts.

Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce in agrarian societies. Early identification of the future for the development of industrial or agricultural areas allows studies to understand the impact on populations dependent on clean water and food resources. Provide educational training to both private and public entities to educate on sustainable development and develop sustainable metrics, ensuring that overdevelopment does not occur and that populations continue to have their food and water needs met.
Governance

Colon ranks amongst the lowest in Panama for Governance with a crime rate of approximately 11 per 1,000 and a crime syndicate rate of 5 per 1,000. Also contributing to the low rank is a low rate of garbage collection. Challenges in governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity, especially within disparate populations—i.e., women and girls. Develop performance measures and effectiveness measures to use limited government resources best to reduce strain and increase governing ability. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
Transportation Capacity

Limited transportation capacity within a province limits the economic opportunity and mobility of society, and it limits the opportunity for individuals to attend higher education and find gainful employment. Reduced transportation capacity can also hamper emergency response activities and decrease public access to vital resources such as adequate healthcare and food.

Identify areas with limited transportation opportunities to identify the best project areas where increasing transportation capacity has the highest impact. Identify emergency routes and vital transportation routes that provide critical access to services to the population. Ensure new transportation routes are developed within sustainable development guidelines with proper materials.
CAPITAL: LA PALMA

Area: 11,893 km²

The Darién province is located in the eastern region of Panama. This Province is divided into 3 districts: La Palma (The Capital), Chepigana, Pinogana and Santa Fe. The province borders Pacific Ocean to the south, Kuna Yala to the north, Panamá to the west and Colombia to the east. The main economic sources are cattle and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR) - Very High**
  Score: 0.613 • Rank: 2/13

- **RESILIENCE (R) - Low**
  Score: 0.402 • Rank: 10/13

- **MULTI-HAZARD EXPOSURE (MHE) - High**
  Score: 0.645 • Rank: 4/13

- **VULNERABILITY (V) - High**
  Score: 0.537 • Rank: 4/13

- **COPING CAPACITY (CC) - Very Low**
  Score: 0.342 • Rank: 11/13

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 4 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.645

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- **Earthquake**
  - 70.2%
  - 39,022
  - 1.9 Billion

- **Flood**
  - 7.3%
  - 4,035
  - 49.1 Million

- **Landslide**
  - 0.3%
  - 145
  - 1 Million

- **Storm Surge**
  - 2.2%
  - 1,229
  - 24.5 Million

- **Sea Level Rise**
  - 19.5%
  - 10,853
  - 153.2 Million

- **Tsunami**
  - 7.2%
  - 3,998
  - 39 Thousand

- **Wildfire**
  - 15.0%
  - 8,358
  - 333.6 Million
Vulnerability in Darién is primarily driven by Population Pressures and Vulnerable Health Status. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

**Environmental Stress**

- **Score:** 0.311
- **Rank:** 9/13

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent forest cover lost</td>
<td>0.08%</td>
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<tr>
<td>Density of livestock per sq. km</td>
<td>64.8</td>
</tr>
<tr>
<td>Percent of freshwater consumption to production</td>
<td>45.1%</td>
</tr>
</tbody>
</table>

**Vulnerable Health Status**

- **Score:** 0.677
- **Rank:** 2/13

<table>
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<tr>
<th>Indicator</th>
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<tbody>
<tr>
<td>Dengue incidence per 100,000 persons</td>
<td>198.4</td>
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<tr>
<td>AIDS incidence per 100,000 persons</td>
<td>11.8</td>
</tr>
<tr>
<td>Malaria Incidence per 100,000 persons</td>
<td>204.3</td>
</tr>
<tr>
<td>TB incidence per 100,000 persons</td>
<td>32.3</td>
</tr>
<tr>
<td>Prevalence of stunting</td>
<td>22.2%</td>
</tr>
<tr>
<td>Disability</td>
<td>4.6%</td>
</tr>
<tr>
<td>Maternal Mortality Rate per 100,000 live births</td>
<td>95.42</td>
</tr>
</tbody>
</table>

**Clean Water Vulnerability**

- **Score:** 0.629
- **Rank:** 5/13

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
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<tbody>
<tr>
<td>Households without access to improved drinking water</td>
<td>11.6%</td>
</tr>
<tr>
<td>Households with access to improved sanitation</td>
<td>81.5%</td>
</tr>
</tbody>
</table>

**Information Access Vulnerability**

- **Score:** 0.540
- **Rank:** 4/13

<table>
<thead>
<tr>
<th>Indicator</th>
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</thead>
<tbody>
<tr>
<td>Households with radio</td>
<td>55.4%</td>
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<tr>
<td>Households with TV</td>
<td>68.5%</td>
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<tr>
<td>Households with internet</td>
<td>61.6%</td>
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<tr>
<td>School attendance rate</td>
<td>77.1%</td>
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<tr>
<td>Average years of schooling</td>
<td>7.1</td>
</tr>
<tr>
<td>Illiteracy rate</td>
<td>11.4%</td>
</tr>
</tbody>
</table>
**Economic Constraints**  
SCORE: 0.466  
RANK: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Poverty rate: 43.1%
- Economic dependency ratio: 0.65

**Gender Inequality**  
SCORE: 0.443  
RANK: 9/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Ratio female to male secondary enrollment: 0.03
- Ratio female to male labor: 0.38
- Proportion of female seats in local government: 0.03

**Population Pressures**  
SCORE: 0.695  
RANK: 4/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Average annual urban population change: 8.4%
- Percent average population change: 1.3%
COPING CAPACITY (CC)

Darién exhibits weaker Coping Capacity in the areas of Transportation Capacity and Economic Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.
**RESILIENCE (R)**

Darién’s score and ranking are due to High Vulnerability combined with Very Low Coping Capacity scores.

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

- **Population Pressures**: Score 0.563, Rank 10/13
- **Vulnerable Health Status**: Score 0.290, Rank 7/13
- **Transportation Capacity**: Score 0.242, Rank 7/13
- **Economic Capacity**: Score 0.362, Rank 4/13

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**HAZARD-SPECIFIC RISK (HSR)**

- **Earthquake**: Score 0.563, RANK 3/13
- **Flood**: Score 0.290, RANK 3/13
- **Sea Level Rise**: Score 0.242, RANK 7/13
- **Storm Surge**: Score 0.455, RANK 1/13
- **Landslide**: Score 0.159, RANK 7/13
- **Wildfire**: Score 0.362, RANK 4/13
- **Tsunami**: Score 0.342, RANK 1/13

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National Disaster Preparedness Baseline Assessment: Panamá
Darién’s score and ranking are due to High Multi-hazard Exposure combined with High Vulnerability and Very Low Coping Capacity scores.

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

Population Pressures

Darién ranks the highest in Panama for population pressures with an annual urban population change of 8.43%. Unplanned population change increases stress on public utilities, emergency services, and health care. An increase in these decreases the ability for governments to respond adequately to disasters and mass casualties with already limited resources. The migration of large populations leads to strain on social services, economic opportunities, and health care access. Lack of economic opportunity can potentially cause increased criminal activity, increased nutrition needs for vulnerable populations (i.e., elderly and adolescents), and lack of adequate shelter for individuals.

Given that Darién ranks fourth highest in overall Multi-Hazard Exposure, continue to monitor population growth to ensure policy, plans, and programs meet requirements to appropriately respond to mass casualties and disasters. Ensure population growth and migration remains at a stable and sustainable level. Identify causes and drivers of migration for large populations to address needs and limit forced migration. Ensure a comprehensive understanding of population change across the country to meet public safety needs and requirements.
DARIÉN RECOMMENDATIONS

Vulnerable Health Status

Lack of adequate health care, housing, nutrition, and sanitary conditions contributes to a high degree of infant mortality, maternal mortality, and inadequate health care access that disproportionately affects disparate populations such as women and children. Darién ranks are high in infant mortality, maternal mortality, disabilities, and diseases leading to the second-highest ranking of vulnerable health status.

Create healthier environments for all members of society and address needs for in-home care, sub-acute care, acute care, and clinical care. Limit exposure to environmental risks, infectious diseases, and provide critical medical intervention of communicable illnesses and emergent medical care. Create public health programs to educate populations on proper nutrition, adolescent, and elderly care, and preventing the spread of communicable diseases. Provide necessary prophylaxis through public health programs to prevent pathogenesis and spread of specific diseases like malaria, dengue fever, and AIDS.
Limited transportation capacity within a province limits the economic opportunity and mobility of society. Darién ranks lowest in overall Transportation Capacity in the country. A high distance to ports means goods must travel longer to reach their destination increasing costs for goods and services. It limits the opportunity for individuals to attend higher education and find gainful employment. Reduced transportation capacity can also hamper emergency response activities and decrease public access to vital resources such as adequate healthcare and food.

Identify areas with limited transportation opportunities to identify project areas where increasing transportation capacity has the highest impact. Identify emergency routes and vital transportation routes that provide critical access to services to the population. Ensure new transportation routes are developed within sustainable development guidelines with proper materials. Identify alternate transit routes and methods to reduce the distance traveled for individuals and goods and services.
Economic Capacity

Socioeconomic deprivation increases dependency on limited government resources and individuals and limits economic opportunity and mobility. Darién ranks low in economic capacity with low median salaries, municipal income, and GDP per capita. Lack of economic ability increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all.
EMBERÁ

NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE
PROVINCE PROFILE

PANAMÁ EMBERÁ

CAPITAL: UNIÓN CHOCÓ

Area: 4,394 km²

Comarca Emberá is located in the eastern region of Panama. This Province is divided into 2 districts: Unión Chocó (The Capital), Cémaco and Sambú. The comarca borders Kuna Yala to the north and Darién which surrounds the comarca boundary. The main economic source is cattle.

RISK AND VULNERABILITY COMPONENT SCORE

MULTI-HAZARD RISK (MHR) - High
Score: 0.589 • Rank: 3/13

RESILIENCE (R) - Very Low
Score: 0.374 • Rank: 11/13

MULTI-HAZARD EXPOSURE (MHE) - Low
Score: 0.513 • Rank: 8/13

VULNERABILITY (V) - Low
Score: 0.605 • Rank: 2/13

COPING CAPACITY (CC) - Low
Score: 0.352 • Rank: 10/13

*For more information on data and components please visit: https://bit.ly/2LqVoUO
MULTI-HAZARD EXPOSURE (MHE)

RANK: 8 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.513

MHE 0.513
Raw MHE 0.1
Relative MHE 0.927

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Earthquake
77.3%
8,898
374 Million

Flood
8.9%
1,020
30.5 Million

Landslide
0

Storm Surge
0

Sea Level Rise
17.3%
1,994

Wildfire
0

Tsunami
0.0%
0
8.9 Thousand
VULNERABILITY (V)

Vulnerability in Emberá is primarily driven by Clean Water Access Vulnerability and Vulnerable Health Status. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  
SCORE: 0.000  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Percent forest cover lost
- Density of livestock per sq. km
- Percent of freshwater consumption to production

Vulnerable Health Status  
SCORE: 0.849  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Dengue incidence per 100,000 persons
- AIDS incidence per 100,000 persons
- Malaria Incidence per 100,000 persons
- TB incidence per 100,000 persons
- Prevalence of stunting
- Disability
- Maternal Mortality Rate per 100,000 live births
- Infant mortality per 1,000 live births
- Life expectancy

Clean Water Vulnerability  
SCORE: 0.904  
RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households without access to improved drinking water
- Households with access to improved sanitation

Information Access Vulnerability  
SCORE: 0.763  
RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with radio
- Households with TV
- Households with internet
- School attendance rate
- Average years of schooling
- Illiteracy rate
National Disaster Preparedness Baseline Assessment: Panamá

PROVINCE PROFILE

**Economic Constraints**

Score: 0.702
Rank: 3/13 Provinces and Indigenous Comarcas Assessed

- Poverty rate: 62.9%
- Economic dependency ratio: 0.74

**Gender Inequality**

Score: 0.363
Rank: 11/13 Provinces and Indigenous Comarcas Assessed

- Ratio female to male secondary enrollment: 0.05
- Ratio female to male labor: 0.31
- Proportion of female seats in local government: 0

**Population Pressures**

Score: 0.655
Rank: 5/13 Provinces and Indigenous Comarcas Assessed

- Average annual urban population change: -
- Percent average population change: 2.1%
Emberá exhibits weaker Coping Capacity in the areas of Economic Capacity and Health Care Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**  
**Score:** 0.116  
**Rank:** 12/13

- Municipal income per capita (thousands of Balboas): 31.67
- Median monthly salary (Balboas): 234.38
- GDP per capita (Balboas): -

**Governance**  
**Score:** 0.663  
**Rank:** 1/13

- Households with public garbage collection: 0.2%
- Crime rate per 1,000 people: 0
- Crime syndicate per 1,000 people: 0.91
- Voter participation percentage: -

**Environmental Capacity**  
**Score:** 0.422  
**Rank:** 2/13

- Protected area percentage: 76.2%
- Reforested area percentage: 0.0%

**Infrastructure Capacity**  
**Score:** 0.255  
**Rank:** 12/13

**Health Care Capacity**  
**Score:** 0.177  
**Rank:** 12/13

- Nurses per 10,000 people: 0.8
- Physicians per 10,000 people: 1.6
- Hospital beds per 10,000 people: 0.0
- DPT3 immunization coverage: 92.7%
- Average distance to hospital (km): 34.99

**Transportation Capacity**  
**Score:** 0.27  
**Rank:** 11/13

- Average distance to port or airport (km): 16.84
- Road density (km): 0

**Communications Capacity**  
**Score:** 0.259  
**Rank:** 12/13

- Households with fixed phone: 0.0%
- Households with mobile phone: 66.6%

**Energy Capacity**  
**Score:** 0.315  
**Rank:** 11/13

- Percent household connected to public electricity grid: 32.2%
Below are the four thematic areas with the weakest relative scores:

- **Clean Water Access Vulnerability**: Score 0.573
- **Vulnerable Health Status**: Score 0.35
- **Economic Capacity**: Score 0.042
- **Health Care Capacity**: Score 0.000

**HAZARD-SPECIFIC RISK (HSR)**

- **Earthquake**: Score 0.573
- **Flood**: Score 0.35
- **Sea Level Rise**: Score 0.042
- **Storm Surge**: Score 0.000
- **Landslide**: Score 0.000
- **Wildfire**: Score 0.000
- **Tsunami**: Score 0.000
Emberá’s score and ranking are due to Low Multi-hazard Exposure combined with Low Vulnerability and Low Coping Capacity scores.

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

1 Clean Water Access Vulnerability

A lack of access to improved water sources and improved sanitation can lead to contracting enteric
diseases from contaminated water supplies and increases the risk of the population facing an acute enteric
disease outbreak. Emberá ranks the second highest in Panama for clean water vulnerability with elevated
rated of unimproved water and sanitation. Acute enteric disease outbreaks from inadequate sanitation and
contaminated water exacerbate existing vulnerabilities and stress local health care resources.

Investment in the development and water treatment and water distribution systems ensures populations have
access to clean water and adequate sanitation services. Develop an emergency action plan to identify and
prevent acute enteric disease outbreaks can prevent community spread and isolate sources of contaminated
water or inadequate sanitation.
EMBERÁ RECOMMENDATIONS

Vulnerable Health Status

Lack of adequate health care contributes to a high degree of infant mortality, maternal mortality, and inadequate health care access that disproportionately affects disparate populations such as women and girls. Emberá ranks the highest in Panama in Vulnerable health status with high rates of prevalence of both Dengue Fever and Malaria. Exacerbating vulnerable health status is the lack of clean water access in Emberá, which can spread enteric disease and strain health care resources.

Create healthier environments for all members of society and address needs for in-home care, sub-acute care, acute care, and clinical care. Limit exposure to environmental risks, infectious diseases, and provide critical medical intervention of communicable illnesses and emergent medical care. Simultaneously address health issues and clean water access to reduce the spread of infectious disease. Create public health programs to educate populations on proper nutrition, adolescent, and elderly care, and preventing the spread of communicable diseases. Provide necessary prophylaxis through public health programs to avoid pathogenesis of specific diseases such as malaria, dengue fever, and AIDS.
Economic Capacity

Socioeconomic deprivation increases dependency on limited both government resources and individuals and limits economic opportunity and mobility. Emberá has the lowest median monthly salary in Panama. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society. Lack of income and currency can exacerbate health status and limit treatment options for individuals and families. Low income can also contribute to inadequate sanitation and access to clean water sources.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all. Create and implement health care programs to ensure all members of society receive adequate care and ensure all of society, regardless of income status, has sufficient access to clean water and sanitary conditions.
Health Care Capacity

Inadequate health care capacity exacerbates other areas such as economic participation, dependency, and adolescent and elderly care. Emberá has one of the greatest distances for populations to reach a hospital in all of Panama and only 1.63 physicians per 10,000 persons and 0.8 nurses per 10,000 persons. Lack of skilled health care professionals and resources creates a limited resource, forcing triage of medical care to meet emergent medical needs. The triage of limited medical resources exacerbates mass casualties, disaster situations, and acute disease outbreaks.

Remove health care barriers to adequately address outpatient medical needs for all members of society, preventing medical conditions from turning into more difficult in-patient treatment situations, creating stress on medical systems. Create educational programs that address proper nutrition, exercise, vaccination, and safe sex to reduce behaviors that require medical intervention. Correctly identify hospitals and their respective trauma levels for pediatric and adult care for mass casualty situations. Ensure hospitals meet standards of care determined by the government. Create and build outpatient health clinics to address medical needs without a hospital. Identify a system of biosurveillance to provide early intervention of disease outbreaks.
PROVINCE PROFILE

PANAMÁ
HERRERA

CAPITAL: CHITRÉ

Area: 2,362 km²

The Herrera province is located in the central region of Panama. This Province is divided into 7 districts: Chitré (The Capital), Las Minas, Los Pozos, Ocú, Parita, Pesé and Santa Maria. The province borders Veraguas to the west, Lost Santos to the south, Coclé to the north and the Pacific Ocean to the west. The main economic sources are sugar cane, cattle and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR) - Very Low**
  - Score: 0.383 • Rank: 13/13

- **RESILIENCE (R) - High**
  - Score: 0.644 • Rank: 3/13

- **MULTI-HAZARD EXPOSURE (MHE) - Low**
  - Score: 0.437 • Rank: 9/13

- **VULNERABILITY (V) - Low**
  - Score: 0.351 • Rank: 11/13

- **COPING CAPACITY (CC) - Very High**
  - Score: 0.638 • Rank: 1/13

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

Population (2020 Estimate) 118,982
Population in poverty 13.8%
Average years in school 9.1
Households with access to improved water 0.8% households
Infant mortality rate (per 1,000 live births) 8
MULTI-HAZARD EXPOSURE (MHE)

RANK: 9 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.437

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- **Earthquake**
  - **37.6%**
  - 44,902
  - 1.3 Billion

- **Flood**
  - **8.0%**
  - 9,512
  - 83.7 Million

- **Landslide**
  - **0.2%**
  - 200
  - 1.2 Million

- **Storm Surge**
  - **0.1%**
  - 137
  - 1.3 Million

- **Sea Level Rise**
  - **22.6%**
  - 27,048
  - 168.2 Million

- **Wildfire**
  - **14.0%**
  - 16,677
  - 37.7 Million

- **Tsunami**
  - **1.0%**
  - 1,142
  - 45 Thousand
VULNERABILITY (V)

Vulnerability in Herrera is primarily driven by Gender Inequality and Environmental Stress. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

**Environmental Stress**  
SCORE: 0.620  
RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.08% Percent forest cover lost
- 96.91 Density of livestock per sq. km
- 98.8% Percent of freshwater consumption to production

**Vulnerable Health Status**  
SCORE: 0.382  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 103.8 Dengue incidence per 100,000 persons
- 5.9 AIDS incidence per 100,000 persons
- 0 Malaria Incidence per 100,000 persons
- 9.3 TB incidence per 100,000 persons
- 4.0% Prevalence of stunting
- 4.6% Disability
- 124.15 Maternal Mortality Rate per 100,000 live births
- 7.5 Infant mortality per 1,000 live births
- 78.76 Life expectancy

**Clean Water Vulnerability**  
SCORE: 0.063  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.8% Households without access to improved drinking water
- 98.9% Households with access to improved sanitation

**Information Access Vulnerability**  
SCORE: 0.360  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 72.8% Households with radio
- 89.7% Households with TV
- 56.3% Households with internet
- 75.4% School attendance rate
- 9.07 Average years of schooling
- 5.3% Illiteracy rate
**Economic Constraints**  
SCORE: 0.129  
RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 13.8% Poverty rate
- 0.52 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.891  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.25 Ratio female to male secondary enrollment
- 0.41 Ratio female to male labor
- 0.05 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.010  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 2.7% Average annual urban population change
- 0.2% Percent average population change
Herrera exhibits weaker Coping Capacity in the areas of Economic Capacity and Governance. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**

- **SCORE: 0.527**
- **RANK: 5/13**

- Municipal income per capita: 51.32
- Median monthly salary: 623.79
- GDP per capita: 4,407

**Governance**

- **SCORE: 0.612**
- **RANK: 3/13**

- Households with public garbage collection: 23.6%
- Crime rate per 1,000 people: 10.92
- Crime syndicate per 1,000 people: 2.15
- Voter participation percentage: 84.7%

**Environmental Capacity**

- **SCORE: 0.457**
- **RANK: 13/13**

- Protected area percentage: 7.2%
- Reforested area percentage: 24.0%

**Infrastructure Capacity**

- **SCORE: 0.836**
- **RANK: 1/13**

**Health Care Capacity**

- **SCORE: 0.866**
- **RANK: 1/13**

- Nurses per 10,000 people: 38.5
- Physicians per 10,000 people: 21.5
- Hospital beds per 10,000 people: 40.1
- DPT3 immunization coverage: 88.6%
- Average distance to hospital (km): 9.33

**Transportation Capacity**

- **SCORE: 0.788**
- **RANK: 1/13**

- Average distance to port or airport (km): 15.74
- Road density (km): 0.71

**Communications Capacity**

- **SCORE: 0.776**
- **RANK: 4/13**

- Households with fixed phone: 25.7%
- Households with mobile phone: 87.1%

**Energy Capacity**

- **SCORE: 0.914**
- **RANK: 5/13**

- Percent household connected to public electricity grid: 89.3%
RESILIENCE (R)

Herrera’s score and ranking are due to Low Vulnerability combined with Very High Coping Capacity scores.

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

- Gender Inequality
- Environmental Stress
- Economic Capacity
- Governance

HAZARD-SPECIFIC RISK (HSR)

- Earthquake
  - RANK: 7 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.283
- Flood
  - RANK: 6 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.183
- Sea Level Rise
  - RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.160
- Storm Surge
  - RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.125
- Landslide
  - RANK: 10 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.097
- Wildfire
  - RANK: 9 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.180
- Tsunami
  - RANK: 9 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.132
Herrera’s score and ranking are due to Low Multi-hazard Exposure combined with Low Vulnerability and Very High Coping Capacity scores.
HERRERA RECOMMENDATIONS

1

Gender Inequality

Herrera province ranks highest in the country in overall Gender Inequality, driven by the combination of high gender disparities in secondary education enrollment rates, limited participation of women in the labor force, and female underrepresentation in local government.

Boost labor participation by promoting workforce opportunities for women that include provisions for family support, such as quality, affordable childcare. Support equal pay for equal work to foster economic growth and reduce economic dependency.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
HERRERA RECOMMENDATIONS

Environmental Stress

Climate change and unsustainable development contribute to food insecurity, unhabitable environments, internally displaced people, forced migration, and economic upheaval. Herrera ranks 3rd in Panama for environmental stress. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development. Herrera also ranks low in overall Economic Capacity, which the drivers of environmental stress can aggravate.

Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Promote sustainable agriculture and develop long-term goals to promote stability within the agriculture industry and ensure stable workforce economic opportunities. Provide educational training to both private and public entities to educate on sustainable development and to develop sustainable metrics ensuring overdevelopment does not take place.
Economic Capacity

Socioeconomic deprivation increases dependency on limited both government resources and individuals and limits economic opportunity and mobility. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
Governance

Challenges in governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations. While Herrera ranks higher on governance than most provinces, the low economic capacity combined with high gender inequality and environmental stress can contribute to many correlated issues such as crime, employment, the disparity between females and males, and governance.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity. Develop methods for measures of performance and measures of effectiveness to use limited government resources best. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society.
KUNA YALA

NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE
PANAMÁ KUNA YALA

CAPITAL: EL PORVENIR

Area: 2,358 km²

Comarca Kuna Yala is located in the eastern region of Panama. This Province is divided into 4 districts: El Porvenir (The Capital), Narganá, Ailigandi, Dubwala and Puerto Obaldía. The comarca borders Atlantic Ocean to the north, Colombia to the east, Colón to the west and Panamá, Darién and Emberá to the south. The main economic sources are cattle and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - Medium**
Score: 0.458  •  Rank: 7/13

**RESILIENCE (R) - Very Low**
Score: 0.368  •  Rank: 12/13

**MULTI-HAZARD EXPOSURE (MHE) - Very Low**
Score: 0.110  •  Rank: 13/13

**VULNERABILITY (V) - Very Low**
Score: 0.597  •  Rank: 3/13

**COPING CAPACITY (CC) - Very Low**
Score: 0.333  •  Rank: 12/13

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 13 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.110

MHE
0.110

Raw MHE
0

Relative MHE
0.22

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Earthquake
13.9%
4,329
108 Million

Flood
-
0

Landslide
-
0

Storm Surge
8.7%
2,714
0 Million

Sea Level Rise
13.3%
4,139
39.5 Million

Wildfire
-
0

Tsunami
0.8%
254
4.3 Thousand

National Disaster Preparedness Baseline Assessment: Panamá
VULNERABILITY (V)

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

Environmental Stress  
SCORE: 0.012  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Percent forest cover lost: 0.03%
Density of livestock per sq. km: 11.22
Percent of freshwater consumption to production: -

Vulnerable Health Status  
SCORE: 0.526  
RANK: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Dengue incidence per 100,000 persons: 122.1
AIDS incidence per 100,000 persons: 0.4
Malaria Incidence per 100,000 persons: 621.7
TB incidence per 100,000 persons: 153.7
Prevalence of stunting: 61.4%
Disability: 1.8%
Maternal Mortality Rate per 100,000 live births: 339.56

Clean Water Vulnerability  
SCORE: 0.934  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Households without access to improved drinking water: 35.0%
Households with access to improved sanitation: 0.4%

Information Access Vulnerability  
SCORE: 0.987  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Households with radio: 29.8%
Households with TV: 34.8%
Households with internet: 7.2%
School attendance rate: 57.2%
Average years of schooling: 4.89
Illiteracy rate: 32.5%
**Economic Constraints**  
SCORE: 0.944  
RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 73.5% Poverty rate
- 0.9 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.073  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.05 Ratio female to male secondary enrollment
- 0.12 Ratio female to male labor
- 0.13 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.703  
RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 2.2% Percent average population change
- Average annual urban population change

**PROVINCE PROFILE**

**COPING CAPACITY (CC)**

Kuna Yala exhibits weaker Coping Capacity in the areas of Economic Capacity and Communications Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**  
*Score: 0.216  Rank: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- Municipal income per capita (thousands of Balboas)
- Median monthly salary (Balboas)
- GDP per capita (Balboas)

**Governance**  
*Score: 0.530  Rank: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 0.0% Households with public garbage collection
- 0.02 Crime rate per 1,000 people
- 0.37 Crime syndicate per 1,000 people
- 70.0% Voter participation percentage

**Environmental Capacity**  
*Score: 0.226  Rank: 5/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 44.1% Protected area percentage
- 0.0% Reforested area percentage

**Infrastructure Capacity**  
*Score: 0.290  Rank: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

**Health Care Capacity**  
*Score: 0.302  Rank: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 6.8 Nurses per 10,000 people
- 7.2 Physicians per 10,000 people
- 12.9 Hospital beds per 10,000 people
- 83.0% DPT3 immunization coverage
- 28.59 Average distance to hospital (km)

**Transportation Capacity**  
*Score: 0.506  Rank: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 3.39 Average distance to port or airport (km)
- 0.01 Road density (km)

**Communications Capacity**  
*Score: 0.298  Rank: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 0.9% Households with fixed phone
- 69.9% Households with mobile phone

**Energy Capacity**  
*Score: 0.052  Rank: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED*

- 7.2% Percent household connected to public electricity grid
PROVINCE PROFILE

RESILIENCE (R)

Kuna Yala’s score and ranking are due to Very Low Vulnerability combined with Very Low Coping Capacity scores.

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

- **Information Access Vulnerability**
- **Economic Constraints**
- **Economic Capacity**
- **Communications Capacity**

HAZARD-SPECIFIC RISK (HSR)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rank</th>
<th>Provinces and Indigenous Comarcas Assessed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>4 / 13</td>
<td>0.409</td>
<td></td>
</tr>
<tr>
<td>Flood</td>
<td>12 / 13</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>8 / 13</td>
<td>0.224</td>
<td></td>
</tr>
<tr>
<td>Storm Surge</td>
<td>3 / 13</td>
<td>0.308</td>
<td></td>
</tr>
<tr>
<td>Landslide</td>
<td>12 / 13</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Wildfire</td>
<td>11 / 13</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Tsunami</td>
<td>10 / 13</td>
<td>0.096</td>
<td></td>
</tr>
</tbody>
</table>
Kuna Yala’s score and ranking are due to Very Low Multi-hazard Exposure combined with Very Low Vulnerability and Very Low Coping Capacity scores.
KUNA YALA RECOMMENDATIONS

Information Access Vulnerability

Kuna Yala ranks the highest in access to information vulnerability in Panama. This high rank is driven by the highest number of households without radios, the second highest without television, the highest homes without internet, and the highest illiteracy rate in Panama. This intensifies marginalization and population pressures by preventing entry into the workforce and disproportionately affects disparate populations such as women and girls.

Other issues such as food security and increases in criminal activity have been linked to information access vulnerability. Lack of ability to deliver critical messages related to education, health, and natural disasters affects society at all levels, especially parts of society without reliable communication in their homes.

Address barriers to education and the possible drivers (poverty, food insecurity) that limit individuals’ opportunities for education. Ensure households have reliable access to communications within their home, such as radio, television, and phone line. Effective communication and warning systems significantly reduce risk and vulnerability.
Economic Constraints

Dependency of individuals limits mobility for populations and increases vulnerability due to lack of opportunity. Kuna Yala ranks the second highest in Panama for economic constraints. Drivers contributing to this rank are the second-highest poverty in Panama and the highest economic dependency rank. Populations such as families with children or the elderly are more likely to be severely affected by natural disasters and face longer recovery times, significantly limiting mobility and employment options.

Assess disaster response and recovery plans to ensure that economically vulnerable populations are incorporated for long- and short-term recovery. Create public policies guaranteeing equal opportunity and fair wages for all.
Economic Capacity

Socioeconomic deprivation increases dependency on limited both government resources and individuals and limits economic opportunity and mobility. Kuna Yala ranks low in economic capacity with a median monthly salary in the province at 349.53. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society.

The high scores among drivers of Information Access Vulnerability and Economic Constraints are exacerbating limitations in economic capacity in Kuna Yala. Encourage programs to generate public revenue and create new job opportunities can address multiple drivers simultaneously. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and provide equal opportunity programs for disparate people to increase economic opportunity for all.

Address barriers to education and the possible drivers (poverty, food insecurity) that limit individuals’ opportunities for education. Ensure households have reliable access to communications within their home, such as radio, television, and phone line. Effective communication and warning systems significantly reduce risk and vulnerability.
KUNA YALA RECOMMENDATIONS

Communications Capacity

Kuna Yala ranks among the lowest in the country for communications capacity. Unreliable communications and lack of access to communications infrastructure exacerbate information access vulnerability and hinder governments’ ability to share critical information during disasters. Many households in this province lack access to fixed telephones and mobile phones. Lack of adequate communication can also contribute to limited access to public health, safety, and nutrition.

Expand communications infrastructure to ensure coverage, accessibility, and reliability of communications during disasters. Encourage telecommunication infrastructure development at a sustainable pace. Identify messages that can contribute to higher education on public health, safety, and nutrition. Create communications plans to share critical information with the public during disasters with primary, alternate, contingency, and emergency plans for communication.
PANAMÁ
LOS SANTOS

CAPITAL: LAS TABLAS

Area: 3,809 km²

The Los Santos province is located in the central region of Panama. This Province is divided into 7 districts: Las Tablas (The Capital), Los Santos, Macaracas, Pedasí, Pocrí and Tonosi. The province borders Pacific Ocean to the south and east, Veraguas to the west and Herrera to the north. The main economic sources are cattle, coffee, sugar cane and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - Low**
Score: 0.431 • Rank: 10/13

**RESILIENCE (R) - Very High**
Score: 0.647 • Rank: 2/13

**MULTI-HAZARD EXPOSURE (MHE) - Medium**
Score: 0.587 • Rank: 5/13

**VULNERABILITY (V) - Medium**
Score: 0.297 • Rank: 12/13

**COPING CAPACITY (CC) - High**
Score: 0.591 • Rank: 3/13

*For more information on data and components please visit: https://bit.ly/2LqVoUO
MULTI-HAZARD EXPOSURE (MHE)

RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.587

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Earthquake
- 64.6%
- 62,856
- 2.1 Billion

Flood
- 3.3%
- 3,173
- 15.3 Million

Landslide
- 0.3%
- 281
- 21.4 Million

Storm Surge
- 0.1%
- 96
- 13.1 Million

Sea Level Rise
- 14.0%
- 13,658
- 249.4 Million

Wildfire
- 0.8%
- 819
- 341.4 Million

Tsunami
- 1.7%
- 1,634
- 63 Thousand

National Disaster Preparedness Baseline Assessment: Panamá
VULNERABILITY (V)

Vulnerability in Los Santos is primarily driven by Environmental Stress and Vulnerable Health Status. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  SCORE: 0.714   RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Percent forest cover lost: 0.01%
- Density of livestock per sq. km: 119.54
- Percent of freshwater consumption to production: 94.3%

Vulnerable Health Status  SCORE: 0.436   RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Dengue incidence per 100,000 persons: 145.7
- AIDS incidence per 100,000 persons: 19.9
- Malaria Incidence per 100,000 persons: 0
- TB incidence per 100,000 persons: 4.2
- Prevalence of stunting: 3.4%
- Disability: 4.8%
- Maternal Mortality Rate per 100,000 live births: 86.73

Clean Water Vulnerability  SCORE: 0.016   RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households without access to improved drinking water: 0.8%
- Households with access to improved sanitation: 99.6%

Information Access Vulnerability  SCORE: 0.296   RANK: 9/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with radio: 73.9%
- Households with TV: 91.3%
- Households with internet: 58.3%
- School attendance rate: 80.8%
- Average years of schooling: 9.06
- Illiteracy rate: 5.4%
PROVINCE PROFILE

**Economic Constraints**  
SCORE: 0.107  
RANK: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 10.2% Poverty rate
- 0.52 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.344  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.01 Ratio female to male secondary enrollment
- 0.34 Ratio female to male labor
- 0.11 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.168  
RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 4.6% Average annual urban population change
- 0.2% Percent average population change
Los Santos exhibits weaker Coping Capacity in the areas of Governance and Economic Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

### Economic Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal income per capita</td>
<td>84.35</td>
<td>4/13</td>
</tr>
<tr>
<td>Median monthly salary</td>
<td>603.35</td>
<td>4/13</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>4,108</td>
<td>4/13</td>
</tr>
</tbody>
</table>

### Governance

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with public garbage collection</td>
<td>40.9%</td>
<td>6/13</td>
</tr>
<tr>
<td>Crime rate per 1,000 people</td>
<td>13.87</td>
<td>6/13</td>
</tr>
<tr>
<td>Crime syndicate per 1,000 people</td>
<td>5.83</td>
<td>6/13</td>
</tr>
<tr>
<td>Voter participation percentage</td>
<td>87.6%</td>
<td>6/13</td>
</tr>
</tbody>
</table>

### Environmental Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected area percentage</td>
<td>8.1%</td>
<td>10/13</td>
</tr>
<tr>
<td>Reforested area percentage</td>
<td>14.5%</td>
<td>10/13</td>
</tr>
</tbody>
</table>

### Infrastructure Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Health Care Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses per 10,000 people</td>
<td>20.2</td>
<td>2/13</td>
</tr>
<tr>
<td>Physicians per 10,000 people</td>
<td>18.9</td>
<td>2/13</td>
</tr>
<tr>
<td>Hospital beds per 10,000 people</td>
<td>47.8</td>
<td>2/13</td>
</tr>
<tr>
<td>DPT3 immunization coverage</td>
<td>89.8%</td>
<td>2/13</td>
</tr>
<tr>
<td>Average distance to hospital (km)</td>
<td>9.33</td>
<td>2/13</td>
</tr>
</tbody>
</table>

### Transportation Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance to port or airport (km)</td>
<td>12.77</td>
<td>4/13</td>
</tr>
<tr>
<td>Road density (km)</td>
<td>0.37</td>
<td>4/13</td>
</tr>
</tbody>
</table>

### Communications Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with fixed phone</td>
<td>18.7%</td>
<td>5/13</td>
</tr>
<tr>
<td>Households with mobile phone</td>
<td>88.8%</td>
<td>5/13</td>
</tr>
</tbody>
</table>

### Energy Capacity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent household connected to public electricity grid</td>
<td>91.8%</td>
<td>3/13</td>
</tr>
</tbody>
</table>
RESILIENCE (R)

Los Santos’s score and ranking are due to Medium Vulnerability combined with High Coping Capacity scores.

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

- **Environmental Stress**
  - Rank: 3
  - Score: 0.332

- **Vulnerable Health Status**
  - Rank: 2
  - Score: 0.647

- **Governance**
  - Rank: 5
  - Score: 0.523

- **Economic Capacity**
  - Rank: 5
  - Score: 0.523

HAZARD-SPECIFIC RISK (HSR)

<table>
<thead>
<tr>
<th>Threat</th>
<th>Rank</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
<td>6</td>
<td>0.332</td>
</tr>
<tr>
<td>Flood</td>
<td>9</td>
<td>0.147</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>12</td>
<td>0.145</td>
</tr>
<tr>
<td>Storm Surge</td>
<td>10</td>
<td>0.172</td>
</tr>
<tr>
<td>Landslide</td>
<td>8</td>
<td>0.118</td>
</tr>
<tr>
<td>Wildfire</td>
<td>10</td>
<td>0.154</td>
</tr>
<tr>
<td>Tsunami</td>
<td>8</td>
<td>0.148</td>
</tr>
</tbody>
</table>

National Disaster Preparedness Baseline Assessment: Panamá
Los Santos’s score and ranking are due to Medium Multi-hazard Exposure combined with Medium Vulnerability and High Coping Capacity scores.
LOS SANTOS RECOMMENDATIONS

Environmental Stress

Climate change and unsustainable development contribute to food insecurity, uninhabitable environments, internally displaced people, forced migration, and economic upheaval. Los Santos ranks the second highest in environmental stress behind Panama Oeste. High poverty rates, income inequality, and food security can be further exacerbated by inadequate planning and unchecked development. Given that Los Santos province has the fifth highest overall Multi-Hazard Exposure in the country, monitoring and reducing environmental stress represents a priority for mitigating disaster impacts.

Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce. Provide educational training to both private and public entities to educate on sustainable development and to develop sustainable metrics ensuring overdevelopment does not take place.
Vulnerable Health Status

Lack of adequate health care contributes to a high degree of infant mortality, maternal mortality, and inadequate health care access that disproportionately affects disparate populations such as women and girls. Los Santos scores near the median for vulnerable health status but higher than average for AIDS prevalence across Panama.

Create healthier environments for all members of society and address needs for in-home care, sub-acute care, acute care, and clinical care. Limit exposure to environmental risks, infectious diseases, and provide critical medical intervention of communicable illnesses and emergent medical care. Create public health programs to educate populations on proper nutrition, adolescent, and elderly care, and preventing the spread of communicable diseases. Provide necessary prophylaxis education through public health programs to prevent the pathogenesis of HIV. Identify programs to assist with the treatment of HIV to prevent AIDS.
LOS SANTOS RECOMMENDATIONS

Governance

Challenges in governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations. Los Santos has a much higher than average crime rate with 13.87 persons per 1,000. Also contributing to its governance rank is the lack of public garbage collection in the province. Lack of public garbage collection can cause an increase in enteric diseases due to contaminated water supplies, contaminated food supplies, and exposure to toxins.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity. Develop methods for measures of performance and measures of effectiveness to use limited government resources best. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society. Identify garbage collection mechanisms to reduce exposure to hazardous waste and potentially dangerous refuse.
LOS SANTOS RECOMMENDATIONS

Economic Capacity

Socioeconomic deprivation increases dependency on limited government resources and individuals and reduces economic opportunity and mobility. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and ensure equal opportunity programs for disparate people to increase economic opportunity for all. While developing opportunities, identify environmental stressors to simultaneously address multiple coping capacity and vulnerability drivers while ensuring that financial capability isn’t increased at the cost of ecological capacity.
**PROVINCE PROFILE**

**PANAMÁ**

**NGÄBE BUGLÉ**

**CAPITAL: CHICHICA**

Area: 6,814 km²

Comarca Ngäbe Buglé is located in the western region of Panama. This Province is divided into 9 districts: Búbiti (The Capital), Besiko, Jirondai, Kankintú, Kusapín, Mirono, Múnà, Nole, Duima, Ñürün, Bledesía. The comarca borders Atlantic Ocean to the north, Bocas del Toro to the west, Veraguas to the east and Chiriquí to the south. The main economic sources are cattle and coffee.

**RISK AND VULNERABILITY COMPONENT SCORE**

- **MULTI-HAZARD RISK (MHR) - Very High**
  Score: 0.693  •  Rank: 1/13

- **RESILIENCE (R) - Very Low**
  Score: 0.241  •  Rank: 13/13

- **MULTI-HAZARD EXPOSURE (MHE) - Medium**
  Score: 0.562  •  Rank: 7/13

- **VULNERABILITY (V) - Medium**
  Score: 0.712  •  Rank: 1/13

- **COPING CAPACITY (CC) - Very Low**
  Score: 0.194  •  Rank: 13/13

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

- Population (2020 Estimate) 224,823
- Population in poverty 81.9%
- Average years in school 5.3
- Households with access to improved water 36.7% households
- Infant mortality rate (per 1,000 live births) 17
MULTI-HAZARD EXPOSURE (MHE)

RANK: 7 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.562

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- Earthquake: 53.7% 105,133 3.4 Billion
- Flood: < 0.1% 8 2.7 Million
- Landslide: 7.8% 15,268 356.7 Million
- Storm Surge: 1.6% 3,053 0 Million
- Sea Level Rise: 7.4% 14,393 226 Million
- Wildfire: 8.4% 16,398 480.6 Million
- Tsunami: 0.0% 88 105 Thousand
Vulnerability in Ngäbe Buglé is primarily driven by Economic Constraints and Population Pressures. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

**Environmental Stress**  
**SCORE: 0.217  RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- Percent forest cover lost: 0.23%
- Density of livestock per sq. km: 33.72
- Percent of freshwater consumption to production: -

**Vulnerable Health Status**  
**SCORE: 0.586  RANK: 4/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- Dengue incidence per 100,000 persons: 1.4
- AIDS incidence per 100,000 persons: 149.2
- Malaria Incidence per 100,000 persons: 36.9
- TB incidence per 100,000 persons: 65.7
- Prevalence of stunting: 53.4%
- Disability: 2.7%
- Maternal Mortality Rate per 100,000 live births: 83.65
- Infant mortality per 1,000 live births: 16.59
- Life expectancy: 71.03

**Clean Water Vulnerability**  
**SCORE: 0.887  RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- Households without access to improved drinking water: 36.7%
- Households with access to improved sanitation: 39.3%

**Information Access Vulnerability**  
**SCORE: 0.707  RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**

- Households with radio: 52.9%
- Households with TV: 8.0%
- Households with internet: 11.2%
- School attendance rate: 83.1%
- Average years of schooling: 5.34
- Illiteracy rate: 24.6%
National Disaster Preparedness Baseline Assessment: Panamá

**Economic Constraints**  
SCORE: 0.986  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Poverty rate: 81.9%  
- Economic dependency ratio: 0.88

**Gender Inequality**  
SCORE: 0.707  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Ratio female to male secondary enrollment: 0.29  
- Ratio female to male labor: 0.25  
- Proportion of female seats in local government: 0.11

**Population Pressures**  
SCORE: 0.894  
RANK: 1/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Average annual urban population change: 2.8%  
- Percent average population change:

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National Disaster Preparedness Baseline Assessment: Panamá  
122
Ngäbe Buglé 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**  
SCORE: 0.083  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Municipal income per capita (thousands of Balboas): 19.07
- Median monthly salary (Balboas): 322.79
- GDP per capita (Balboas): -

**Governance**  
SCORE: 0.505  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with public garbage collection: 0.1%
- Crime rate per 1,000 people: 0.02
- Crime syndicate per 1,000 people: 0.74
- Voter participation percentage: 68.2%

**Environmental Capacity**  
SCORE: 0.083  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Protected area percentage: 14.7%
- Reforested area percentage: 2.0%

**Infrastructure Capacity**  
SCORE: 0.031  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

**Health Care Capacity**  
SCORE: 0.055  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Nurses per 10,000 people: 1.1
- Physicians per 10,000 people: 1.4
- Hospital beds per 10,000 people: 3.6
- DPT3 immunization coverage: 73.5%
- Average distance to hospital (km): 30.17

**Transportation Capacity**  
SCORE: 0.067  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Average distance to port or airport (km): 32.58
- Road density (km): 0.1

**Communications Capacity**  
SCORE: 0.002  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with fixed phone: 0.2%
- Households with mobile phone: 36.0%

**Energy Capacity**  
SCORE: 0.000  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Percent household connected to public electricity grid: 2.2%
RESILIENCE (R)

Ngäbe Buglé’s score and ranking are due to Medium Vulnerability combined with Very Low Coping Capacity scores.

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

- Economic Constraints
- Population Pressures
- Communications Capacity
- Health Care Capacity

HAZARD-SPECIFIC RISK (HSR)

- Earthquake
  - RANK: 1 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.683

- Flood
  - RANK: 7 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.172

- Sea Level Rise
  - RANK: 6 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.250

- Storm Surge
  - RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.219

- Landslide
  - RANK: 1 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.575

- Wildfire
  - RANK: 1 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.400

- Tsunami
  - RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  - SCORE: 0.077
Ngäbe Buglé’s score and ranking are due to Medium Multi-hazard Exposure combined with Medium Vulnerability and Very Low Coping Capacity scores.
NGÄBE BUGLÉ RECOMMENDATIONS

Economic Constraints

Ngäbe Buglé ranks the highest in economic constraints in all of Panama. Contributing to this high rank is the highest poverty ranking and the second-highest economic dependency rank in Panama. Dependency of individuals limits mobility for populations and increases vulnerability due to lack of opportunity. Populations such as families with children or the elderly are more likely to be severely affected by natural disasters and face longer recovery times.

Assess disaster response and recovery plans to ensure that economically vulnerable populations are incorporated for long- and short-term recovery. Create public policies guaranteeing equal opportunity and fair wages for all.
NGÄBE BUGLÉ RECOMMENDATIONS

Population Pressures

Ngäbe Buglé also ranks the highest in Panama for population pressures, with the second-highest rank in average population change in all of Panama. Population growth increases stress on public utilities, emergency services, and health care. An increase in these decreases the ability for governments to respond adequately to disasters and mass casualties with already limited resources. The migration of large populations leads to strain on social services, economic opportunities, and health care access. Lack of economic opportunity can potentially cause increased criminal activity, increased nutrition needs for vulnerable populations (i.e., elderly and adolescents), and lack of adequate shelter for individuals.

Continue to monitor population growth to ensure policy, plans, and programs meet requirements to appropriately respond to mass casualties and disasters. Ensure population growth and migration remains at a stable and sustainable level. Identify causes and drivers of migration for large populations to address needs and limit forced migration. Ensure a comprehensive understanding of population change across the country to meet public safety needs and requirements.
NGÁBE BUGLÉ RECOMMENDATIONS

Communications Capacity

Ngábe Buglé ranks low in communication capacity with the lowest rates in mobile phone use and second lowest in fixed telephones available at the household level. Unreliable communications and lack of access to communications infrastructure exacerbate information access vulnerability and hinder governments’ ability to share critical information during disasters. Lack of adequate communication can also contribute to limited access to public health, safety, and nutrition.

Expand communications infrastructure to ensure coverage, accessibility, and reliability of communications during disasters. Encourage telecommunication infrastructure development at a sustainable pace. Identify messages that can contribute to higher education on public health, safety, and nutrition. Create communications plans to share critical information with the public with primary, alternate, contingency, and emergency plans for communication.
NGÄBE BUGLÉ RECOMMENDATIONS

Health Care Capacity

Ngäbe Buglé ranks the lowest in Panama in health care capacity with 1.1 nurses per 10,000 persons and 1.39 physicians per 10,000 persons. Inadequate health care capacity exacerbates other areas such as economic participation, dependency, and adolescent and elderly care. Lack of skilled health care professionals and resources creates a limited resource, forcing care to be triaged to meet the emergent medical needs. This is only exacerbated in mass casualty, disaster situations, and acute disease outbreaks.

Remove health care barriers to adequately address outpatient medical needs for all members of society, preventing medical conditions from turning into more difficult in-patient treatment situations, creating stress on medical systems. Create educational programs that address proper nutrition, exercise, vaccination, and safe sex to reduce behaviors that require medical intervention. Correctly identify hospitals and their respective trauma levels for pediatric and adult care planning mass casualty situations. Ensure hospitals meet standards of care determined by the government. Create and build outpatient health clinics to address medical needs that can be met without a hospital.
PANAMÁ

NDPBA PROVINCES AND INDIGENOUS COMARCAS
PROFILE
PROVINCE PROFILE

PANAMÁ

CAPITAL: PANAMA CITY

Area: 8,409 km²

Located in the central region of Panama, the capital of the province of Panamá is Panamá City which also serves as the National Capital. The province is divided into 6 districts: Balboa, Chepo, Chirmán, San Miguelito and Taboga. The district borders Colón and Kuna Yala to the north, Panama Oeste to the west, Darién to the east and the Pacific Ocean to the south. The main economic sources are cattle, fishing, construction materials, power generating and meat and milk processing.

RISK AND VULNERABILITY COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR) - Low**
  Score: 0.442  •  Rank: 8/13
- **RESILIENCE (R) - Very High**
  Score: 0.685  •  Rank: 1/13
- **MULTI-HAZARD EXPOSURE (MHE) - Very High**
  Score: 0.697  •  Rank: 1/13
- **VULNERABILITY (V) - Very High**
  Score: 0.266  •  Rank: 13/13
- **COPING CAPACITY (CC) - Very High**
  Score: 0.636  •  Rank: 2/13

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 1 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.697

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- **Earthquake**: 1.2%
  - 16,797
  - 105.1 Million

- **Landslide**: 9.1%
  - 132,850
  - 6.1 Billion

- **Sea Level Rise**: 26.7%
  - 389,091
  - 15 Billion

- **Tsunami**: 5.5%
  - 80,681
  - 17 Thousand

- **Flood**: 0.2%
  - 2,644
  - 118.8 Million

- **Storm Surge**: 0.3%
  - 3,885
  - 91.9 Million

- **Wildfire**: 21.8%
  - 317,703
  - 7.6 Billion
VULNERABILITY (V)

Vulnerability in Panamá is primarily driven by Environmental Stress and Gender Inequality. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  
SCORE: 0.461  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Vulnerable Health Status  
SCORE: 0.282  
RANK: 11/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Clean Water Vulnerability  
SCORE: 0.086  
RANK: 10/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

Information Access Vulnerability  
SCORE: 0.197  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
**Economic Constraints**  
SCORE: 0.034  
RANK: 13/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 12.3% Poverty rate
- 0.44 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.445  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.15 Ratio female to male secondary enrollment
- 0.25 Ratio female to male labor
- 0.21 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.353  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 3.4% Average annual urban population change
- 1.9% Percent average population change
Panamá exhibits weaker Coping Capacity in the areas of Governance and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**  
- **Score:** 0.96  
- **Rank:** 1/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal income per capita (thousands of Balboas)</td>
<td>169.51</td>
<td></td>
</tr>
<tr>
<td>Median monthly salary (Balboas)</td>
<td>767.71</td>
<td></td>
</tr>
<tr>
<td>GDP per capita (Balboas)</td>
<td>16,183</td>
<td></td>
</tr>
</tbody>
</table>

**Governance**  
- **Score:** 0.327  
- **Rank:** 10/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with public garbage collection</td>
<td>68.8%</td>
<td></td>
</tr>
<tr>
<td>Crime rate per 1,000 people</td>
<td>12.22</td>
<td></td>
</tr>
<tr>
<td>Crime syndicate per 1,000 people</td>
<td>7.81</td>
<td></td>
</tr>
<tr>
<td>Voter participation percentage</td>
<td>69.4%</td>
<td></td>
</tr>
</tbody>
</table>

**Environmental Capacity**  
- **Score:** 0.162  
- **Rank:** 6/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected area percentage</td>
<td>26.7%</td>
<td></td>
</tr>
<tr>
<td>Reforested area percentage</td>
<td>2.3%</td>
<td></td>
</tr>
</tbody>
</table>

**Infrastructure Capacity**  
- **Score:** 0.779  
- **Rank:** 2/13 Provinces and Indigenous Comarcas Assessed

**Health Care Capacity**  
- **Score:** 0.662  
- **Rank:** 4/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses per 10,000 people</td>
<td>16.7</td>
<td></td>
</tr>
<tr>
<td>Physicians per 10,000 people</td>
<td>23.8</td>
<td></td>
</tr>
<tr>
<td>Hospital beds per 10,000 people</td>
<td>27.1</td>
<td></td>
</tr>
<tr>
<td>DPT3 immunization coverage</td>
<td>76.6%</td>
<td></td>
</tr>
<tr>
<td>Average distance to hospital (km)</td>
<td>6.77</td>
<td></td>
</tr>
</tbody>
</table>

**Transportation Capacity**  
- **Score:** 0.454  
- **Rank:** 10/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance to port or airport (km)</td>
<td>12.35</td>
<td></td>
</tr>
<tr>
<td>Road density (km)</td>
<td>0.16</td>
<td></td>
</tr>
</tbody>
</table>

**Communications Capacity**  
- **Score:** 1.000  
- **Rank:** 1/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with fixed phone</td>
<td>37.4%</td>
<td></td>
</tr>
<tr>
<td>Households with mobile phone</td>
<td>95.2%</td>
<td></td>
</tr>
</tbody>
</table>

**Energy Capacity**  
- **Score:** 1.000  
- **Rank:** 1/13 Provinces and Indigenous Comarcas Assessed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent household connected to public electricity grid</td>
<td>97.5%</td>
<td></td>
</tr>
</tbody>
</table>
**RESILIENCE (R)**

Panamá’s score and ranking are due to Very High Vulnerability combined with Very High Coping Capacity scores.

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

- **Environmental Stress**
- **Gender Inequality**
- **Governance**
- **Transportation Capacity**

**HAZARD-SPECIFIC RISK (HSR)**

- **Earthquake**
  - **Rank:** 8 / 13
  - **Score:** 0.135

- **Flood**
  - **Rank:** 10 / 13
  - **Score:** 0.128

- **Sea Level Rise**
  - **Rank:** 5 / 13
  - **Score:** 0.250

- **Storm Surge**
  - **Rank:** 9 / 13
  - **Score:** 0.172

- **Landslide**
  - **Rank:** 2 / 13
  - **Score:** 0.315

- **Wildfire**
  - **Rank:** 6 / 13
  - **Score:** 0.240

- **Tsunami**
  - **Rank:** 2 / 13
  - **Score:** 0.297
Panamá’s score and ranking are due to Very High Multi-hazard Exposure combined with Very High Vulnerability and Very High Coping Capacity scores.

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

**Multi-Hazard Exposure**
- Panamá Score: 0.697
- Country Score: 0.504

**Vulnerability**
- Panamá Score: 0.266
- Country Score: 0.447

**Coping Capacity**
- Panamá Score: 0.636
- Country Score: 0.474
**PANAMÁ RECOMMENDATIONS**

**Environmental Stress**

Climate change and unsustainable development contribute to food insecurity, uninhabitable environments, internally displaced people, forced migration, and economic upheaval. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development. Given that Panamá province has the highest overall Multi-Hazard Exposure in the country, monitoring and reducing environmental stress represents a priority for mitigating disaster impacts.

Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce. Provide educational training to both private and public entities to educate on sustainable development and to develop sustainable metrics ensuring overdevelopment does not take place.
Gender Inequality

Gender-based disparities in education and economic activity increase economic dependency and exacerbate population pressures, increasing strain in civil society. Population increases create additional competition in the workforce. A lack of targeted interventions to ensure women’s participation in the labor force can increase gender inequality, creating a considerable disparity between women and men.

Create targeted interventions to increase workforce populations for females through training women with the necessary skills to participate in the economy. Explore incentive-based initiatives to encourage employers to hire women and other marginalized groups. Identify drivers that marginalize women and girls to create targeted interventions to reduce inequality and increase the quality of life for all.
Governance

Challenges in governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations. Panamá has a crime rate of 12.22 per 1,000 persons and a low voter percentage rank of just under 70 percent.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity. Develop methods for measures of performance and measures of effectiveness to use limited government resources best. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society. Encourage civic education to increase voter participation in the region and identify messaging to encourage trust and relationships between government and society.
PANAMÁ RECOMMENDATIONS

Transportation Capacity

Panamá has below average road density compared other provinces, leading to a lower overall Transportation Capacity rank. Reduced transportation capacity within a province limits the economic opportunity and mobility of society, and it limits the opportunity for individuals to attend higher education and find gainful employment. Limited transportation capacity can also hamper emergency response activities and decrease public access to vital resources such as adequate healthcare and food.

Identify areas with limited transportation opportunities to identify the best project areas where increasing transportation capacity has the highest impact. Identify emergency routes and vital transportation routes that provide critical access to services to the population. Ensure new transportation routes are developed within sustainable development guidelines with proper materials.
PANAMÁ

PANAMÁ OESTE

NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE

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PROVINCE PROFILE

PANAMÁ
PANAMÁ OESTE

CAPITAL: LA CHORRERA
Area: 2,880 km²
The Panamá Oeste province is located in the central region of Panama. This Province is divided into 5 districts: La Chorrera (the Capital), Arraiján, Capira, Chame and San Carlos. The province borders Pacific Ocean to the south, Colón to the north, Coclé to the west and Panamá to the east. The main economic sources are cattle and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR) - Very Low**
  Score: 0.410 • Rank: 11/13

- **RESILIENCE (R) - Low**
  Score: 0.538 • Rank: 8/13

- **MULTI-HAZARD EXPOSURE (MHE) - Very Low**
  Score: 0.305 • Rank: 11/13

- **VULNERABILITY (V) - Very Low**
  Score: 0.391 • Rank: 8/13

- **COPING CAPACITY (CC) - Low**
  Score: 0.467 • Rank: 8/13

Population (2020 Estimate)
606,458

Population in poverty
7.3%

Average years in school
9.8

Households with access to improved water
1.6% households

Infant mortality rate (per 1,000 live births)
12

*For more information on data and components please visit: https://bit.ly/2LqYoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.305

MULTI-HAZARD EXPOSURE (MHE)

MHE 0.305
Raw MHE 0.592
Relative MHE 0.019

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

Earthquake
- 0

Flood
- 0.1%
366
19.9 Million

Landslide
1.0%
5,305
26.3 Million

Storm Surge
0.1%
621
9.6 Million

Sea Level Rise
16.0%
86,679
3.9 Billion

Wildfire
3.4%
18,658
347.8 Million

Tsunami
2.8%
15,223

National Disaster Preparedness Baseline Assessment: Panamá
Vulnerability in Panamá Oeste is primarily driven by Environmental Stress and Gender Inequality. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.
**Economic Constraints**  
SCORE: 0.046  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 7.3% Poverty rate
- 0.48 Economic dependency ratio

**Gender Inequality**  
SCORE: 0.767  
RANK: 3/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.26 Ratio female to male secondary enrollment
- 0.33 Ratio female to male labor
- 0.25 Proportion of female seats in local government

**Population Pressures**  
SCORE: 0.594  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 5.3% Average annual urban population change
- 2.3% Percent average population change
Panamá Oeste exhibits weaker Coping Capacity in the areas of Governance and Health Care Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

### Economic Capacity

**Score:** 0.641  **Rank:** 3/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal income per capita</td>
<td>94.24</td>
</tr>
<tr>
<td>Median monthly salary</td>
<td>694.06</td>
</tr>
<tr>
<td>GDP per capita (Balboas)</td>
<td>3,666</td>
</tr>
</tbody>
</table>

### Governance

**Score:** 0.203  **Rank:** 13/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with public garbage collection</td>
<td>16.2%</td>
</tr>
<tr>
<td>Crime rate per 1,000 people</td>
<td>14.16</td>
</tr>
<tr>
<td>Crime syndicate per 1,000 people</td>
<td>8.48</td>
</tr>
<tr>
<td>Voter participation percentage</td>
<td>74.1%</td>
</tr>
</tbody>
</table>

### Environmental Capacity

**Score:** 0.044  **Rank:** 11/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected area percentage</td>
<td>7.9%</td>
</tr>
<tr>
<td>Reforested area percentage</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

### Infrastructure Capacity

**Score:** 0.700  **Rank:** 5/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT3 immunization coverage</td>
<td>76.6%</td>
</tr>
<tr>
<td>Average distance to hospital (km)</td>
<td>14.33</td>
</tr>
</tbody>
</table>

### Health Care Capacity

**Score:** 0.308  **Rank:** 10/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses per 10,000 people</td>
<td>5.8</td>
</tr>
<tr>
<td>Physicians per 10,000 people</td>
<td>6.9</td>
</tr>
<tr>
<td>Hospital beds per 10,000 people</td>
<td>6.5</td>
</tr>
<tr>
<td>DPT3 immunization coverage</td>
<td>76.6%</td>
</tr>
<tr>
<td>Average distance to hospital (km)</td>
<td>14.33</td>
</tr>
</tbody>
</table>

### Transportation Capacity

**Score:** 0.72  **Rank:** 2/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average distance to port or airport (km)</td>
<td>6.88</td>
</tr>
<tr>
<td>Road density (km)</td>
<td>0.4</td>
</tr>
</tbody>
</table>

### Communications Capacity

**Score:** 0.819  **Rank:** 2/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with fixed phone</td>
<td>24.1%</td>
</tr>
<tr>
<td>Households with mobile phone</td>
<td>94.8%</td>
</tr>
</tbody>
</table>

### Energy Capacity

**Score:** 0.954  **Rank:** 2/13

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent household connected to public electricity grid</td>
<td>93.1%</td>
</tr>
</tbody>
</table>
RESILIENCE (R)

Panamá Oeste’s score and ranking are due to Very Low Vulnerability combined with Low Coping Capacity scores.

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

1. Environmental Stress: Score: 0.000
2. Gender Inequality: Score: 0.156
3. Governance: Score: 0.289
4. Health Care Capacity: Score: 0.210

HAZARD-SPECIFIC RISK (HSR)

1. Earthquake: RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.000
2. Flood: RANK: 8 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.156
   SCORE: 0.289
4. Storm Surge: RANK: 7 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.199
5. Landslide: RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.186
6. Wildfire: RANK: 8 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.210
7. Tsunami: RANK: 3 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
   SCORE: 0.241
Panamá Oeste's score and ranking are due to Very Low Multi-hazard Exposure combined with Very Low Vulnerability and Low Coping Capacity scores.
PANAMÁ OESTE RECOMMENDATIONS

Environmental Stress

Panamá Oeste ranks just above average in environmental stress. Climate change, freshwater withdrawals, and forest cover loss contribute to food insecurity, unhabitable environments, internally displaced people, forced migration, and economic upheaval. High poverty rates and income inequality can further be exacerbated with inadequate planning and unchecked development.

Environmental protection is vital to ensuring sustainable development within the country, and land management is essential to monitor ecological stress while balancing economic use closely. Promoting sustainable agriculture and the development of long-term goals promotes stability within the agriculture industry and ensures stable economic opportunities for the workforce. Provide educational training to both private and public entities to educate on sustainable development and to develop sustainable metrics ensuring overdevelopment does not take place.
Gender Inequality

Panamá Oeste has the third-highest gender inequality rank in Panama. Contributing to the high rank are gender-based disparities in secondary education enrollment and labor force participation. Provinces where women are less economically and politically active may represent economic dependence, putting additional strain on civil society. Population increases also create additional competition in the workforce. A lack of targeted interventions to ensure women’s participation can increase gender inequality, creating a considerable disparity in incomes and livelihoods between women and men.

Boost labor participation by promoting workforce opportunities for women that include provisions for family support, such as quality, affordable childcare. Support equal pay for equal work to foster economic growth and reduce economic dependency.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
Governance

Panamá Oeste ranks the lowest in governance in all of Panama. It has the highest crime rate at 14.16 per 1,000 persons and the highest rate of crime syndicates, at 8.48 per 1,000 persons. Challenges in governance can undermine stability for civil society creating further stress among disparate and disadvantaged populations.

Provide financial and technical assistance to law enforcement to adequately address criminal activity. Identify underlying factors and drivers of illegal activity to ensure targeted actions with government resources are best utilized to reduce criminal activity. Develop methods for measures of performance and measures of effectiveness to use limited government resources best. Identify feedback mechanisms for the public to best understand and identify issues of governance within civil society.
PANAMÁ OESTE RECOMMENDATIONS

Health Care Capacity

Panamá Oeste ranks third lowest in health care capacity in Panama. Contributing to the low rank is low rates of physician and nurses per 10,000, limited available hospital beds per 10,000, and reduced immunization coverage. Inadequate health care capacity exacerbates other areas such as economic participation, dependency, and adolescent and elderly care. Lack of skilled health care professionals and resources creates a limited resource, forcing care to be triaged to meet the emergent medical needs. This is only exacerbated in mass casualty, disaster situations, and acute disease outbreaks.

Remove health care barriers to adequately address outpatient medical needs for all members of society, preventing medical conditions from turning into more difficult in-patient treatment situations, creating stress on medical systems. Create educational programs that address proper nutrition, exercise, vaccination, and safe sex to reduce behaviors that require medical intervention. Correctly identify hospitals and their respective trauma levels for pediatric and adult care planning mass casualty situations. Ensure hospitals meet standards of care determined by the government.
VERAGUAS

NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE

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PROVINCE PROFILE

PANAMÁ
VERAGUAS

CAPITAL: SANTIAGO DE VERAGUAS

Area: 10,588 km²

The Veraguas province is located in the western region of Panama. This Province is divided into 12 districts: Santiago de Veraguas (The Capital), Atalaya, Calobre, Cañazas, La Mesa, Las Palmas, Mariato, Montjio, Río de Jesús, San Francisco, Santa Fe, Santiago and Soná. The province borders Atlantic Ocean to the north, Pacific Ocean to the south, Ngäbe Buglé and Chiriquí to the west and Colón, Coclé, Herrera and Los Santos to the east. The main economic sources are cattle, coffee and fishing.

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR) - Medium**
Score: 0.516 • Rank: 5/13

**RESILIENCE (R) - Medium**
Score: 0.571 • Rank: 6/13

**MULTI-HAZARD EXPOSURE (MHE) - Very High**
Score: 0.691 • Rank: 2/13

**VULNERABILITY (V) - Very High**
Score: 0.406 • Rank: 6/13

**COPING CAPACITY (CC) - Medium**
Score: 0.549 • Rank: 5/13

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

**Population (2020 Estimate)**
248,325

**Population in poverty**
34.0%

**Average years in school**
8.3

**Households with access to improved water**
5.4% households

**Infant mortality rate (per 1,000 live births)**
7
MULTI-HAZARD EXPOSURE (MHE)

RANK: 2 / 13 PROVINCES AND INDIGENOUS COMARCAS
SCORE: 0.691

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- **Earthquake**: 64.5%
  - 160,207
  - 3.4 Billion

- **Landslide**: 1.6%
  - 4,036
  - 137.9 Million

- **Sea Level Rise**: 6.2%
  - 15,486
  - 636.8 Million

- **Tsunami**: 1.1%
  - 2,671
  - 160 Thousand

- **Flood**: 3.8%
  - 9,387
  - 319.9 Million

- **Storm Surge**: 0.3%
  - 803
  - 15 Million

- **Wildfire**: 22.6%
  - 56,257
  - 1.4 Billion
VULNERABILITY (V)

Vulnerability in Veraguas is primarily driven by Gender Inequality and Information Access Vulnerability. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress  
SCORE: 0.434  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 0.12%  
Percent forest cover lost

- 63.8  
Density of livestock per sq. km

- 83.5%  
Percent of freshwater consumption to production

Vulnerable Health Status  
SCORE: 0.247  
RANK: 12/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 34.5  
Dengue incidence per 100,000 persons

- 0.5  
AIDS incidence per 100,000 persons

- 0.4  
Malaria Incidence per 100,000 persons

- 18.3  
TB incidence per 100,000 persons

- 14.5%  
Prevalence of stunting

- 3.6%  
Disability

- 24.85  
Maternal Mortality Rate per 100,000 live births

- 6.8  
Infant mortality per 1,000 live births

- 77.48  
Life expectancy

Clean Water Vulnerability  
SCORE: 0.399  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 5.4%  
Households without access to improved drinking water

- 95.5%  
Households with access to improved sanitation

Information Access Vulnerability  
SCORE: 0.478  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- 71.3%  
Households with radio

- 75.4%  
Households with TV

- 49.4%  
Households with internet

- 71.8%  
School attendance rate

- 8.26  
Average years of schooling

- 8.0%  
Illiteracy rate
<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
<th>Rank</th>
<th>Provinces and Indigenous Comarcas Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Constraints</td>
<td>0.382</td>
<td>6/13</td>
<td>13</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>34.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic dependency ratio</td>
<td>0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender Inequality</td>
<td>0.851</td>
<td>2/13</td>
<td>13</td>
</tr>
<tr>
<td>Ratio female to male secondary enrollment</td>
<td>0.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio female to male labor</td>
<td>0.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of female seats in local government</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Pressures</td>
<td>0.050</td>
<td>12/13</td>
<td>13</td>
</tr>
<tr>
<td>Average annual urban population change</td>
<td>2.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent average population change</td>
<td>0.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Veraguas exhibits weaker Copping Capacity in the areas of Economic Capacity and Transportation Capacity. The bar charts indicate the socioeconomic themes contributing to the overall Copping Capacity score.

### Economic Capacity

Score: 0.460  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Municipal income per capita (thousands of Balboas): 44.82
- Median monthly salary (Balboas): 607.88
- GDP per capita (Balboas): 3,289

### Governance

Score: 0.633  
RANK: 2/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with public garbage collection: 25.6%
- Crime rate per 1,000 people: 7.21
- Crime syndicate per 1,000 people: 3.01
- Voter participation percentage: 82.8%

### Environmental Capacity

Score: 0.416  
RANK: 7/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Protected area percentage: 21.5%
- Reforested area percentage: 17.3%

### Infrastructure Capacity

Score: 0.597  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

### Health Care Capacity

Score: 0.598  
RANK: 6/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Nurses per 10,000 people: 16.9
- Physicians per 10,000 people: 12.4
- Hospital beds per 10,000 people: 19.6
- DPT3 immunization coverage: 90.5%
- Average distance to hospital (km): 14.95

### Transportation Capacity

Score: 0.5  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Average distance to port or airport (km): 18.72
- Road density (km): 0.37

### Communications Capacity

Score: 0.624  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Households with fixed phone: 16.6%
- Households with mobile phone: 83.7%

### Energy Capacity

Score: 0.666  
RANK: 8/13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED

- Percent household connected to public electricity grid: 65.7%
RESILIENCE (R)

Veraguas’s score and ranking are due to Very High Vulnerability combined with Medium Coping Capacity scores.

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

- Gender Inequality
- Information Access Vulnerability
- Economic Capacity
- Transportation Capacity

HAZARD-SPECIFIC RISK (HSR)

- Earthquake: RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.402
- Flood: RANK: 4 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.224
- Sea Level Rise: RANK: 10 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.161
- Storm Surge: RANK: 6 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.210
- Landslide: RANK: 3 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.205
- Wildfire: RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.322
- Tsunami: RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED
  SCORE: 0.190
Veraguas’s score and ranking are due to Very High Multi-hazard Exposure combined with Very High Vulnerability and Medium Coping Capacity scores.

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

Gender Inequality

Veraguas has the second-highest Gender Inequality rank in Panama. Contributing to the high rank are gender-based disparities in secondary education enrollment and labor force participation, in addition to limited female representation in local government. Provinces where women are less economically and politically active may represent economic dependence, putting additional strain on civil society. Population increases create additional competition in the workforce. A lack of targeted interventions to ensure women’s participation can increase gender inequality, creating a considerable disparity in incomes and livelihoods between women and men.

Boost labor participation by promoting workforce opportunities for women that include provisions for family support, such as quality, affordable childcare. Support equal pay for equal work to foster economic growth and reduce economic dependency.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
VERAGUAS RECOMMENDATIONS

Information Access Vulnerability

Information access vulnerability intensifies marginalization and population pressures by preventing entry into the workforce and disproportionately affects disparate populations such as women and girls. Other issues such as food security and increases in criminal activity have also been linked to information access vulnerability. Lack of ability to deliver critical messages related to education, health, and natural disasters affects society at all levels, especially parts of society without reliable communication in their homes. Given that Veraguas has the second highest overall Multi-Hazard Exposure in Panama, information access represents a vital lifeline for communicating and reducing hazard impacts.

Address barriers to education and the possible drivers (poverty, food insecurity) that limit individuals’ opportunities for education. Ensure households have reliable access to communications within their home, such as radio, television, and phone line. Effective communication and warning systems greatly reduce risk and vulnerability.
Economic Capacity

Socioeconomic deprivation increases dependency on limited both government resources and individuals and limits economic opportunity and mobility. Lack of economic capacity increases criminal activity, provides opportunities for transnational criminal organizations to gain influence, and stresses relationships between individuals and civil society.

Encourage programs to generate public revenue and create new job opportunities. Address existing public policy to limit inflation and ensure equal employment opportunities, especially for marginalized populations. Expand and ensure equal opportunity programs for disparate people to increase economic opportunity for all.

Design and implement intervention strategies to promote and sustain engagement of both male and female students in secondary-level education and reduce dropout rates. Promote development and empowerment of young people through social support structures and employment opportunities including diverse school-to-work programs and leadership academies.
Transportation Capacity

Limited transportation capacity within a province limits the economic opportunity and mobility of society, and it limits the opportunity for individuals to attend higher education and find gainful employment. Reduced transportation capacity can also hamper emergency response activities and decrease public access to vital resources such as adequate healthcare and food.

Identify areas with limited transportation opportunities to identify the best project areas where increasing transportation capacity has the highest impact. Identify emergency routes and vital transportation routes that provide critical access to services to the population. Ensure new transportation routes are developed within sustainable development guidelines with proper materials.
CAPITAL:
Area: km²

RISK AND VULNERABILITY
COMPONENT SCORE

- **MULTI-HAZARD RISK (MHR)** -
  Score: • Rank: /

- **RESILIENCE (R)** -
  Score: • Rank: /

- **MULTI-HAZARD EXPOSURE (MHE)** -
  Score: • Rank: /

- **VULNERABILITY (V)** -
  Score: • Rank: /

- **COPING CAPACITY (CC)** -
  Score: • Rank: /

Population (2020 Estimate)

Population in poverty

Average years in school

Households with access to improved water households

Infant mortality rate (per 1,000 live births)

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: /  
SCORE:

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:
VULNERABILITY (V)

Vulnerability in [province] is primarily driven by [factors] and [factors]. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

**Environmental Stress**

Score: 1

- Percent forest cover lost
- Density of livestock per sq. km
- Percent of freshwater consumption to production

**Vulnerable Health Status**

Score: 1

- Dengue incidence per 100,000 persons
- AIDS incidence per 100,000 persons
- Malaria Incidence per 100,000 persons
- TB incidence per 100,000 persons
- Prevalence of stunting
- Disability
- Maternal Mortality Rate per 100,000 live births
- Infant mortality per 1,000 live births
- Life expectancy

**Clean Water Vulnerability**

Score: 1

- Households without access to improved drinking water
- Households with access to improved sanitation

**Information Access Vulnerability**

Score: 1

- Households with radio
- Households with TV
- Households with internet
- School attendance rate
- Average years of schooling
- Illiteracy rate
<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
<th>RANK: / ASSESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Constraints</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Poverty rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic dependency</td>
<td></td>
<td></td>
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<tr>
<td>ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender Inequality</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ratio female to male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>secondary enrollment</td>
<td></td>
<td></td>
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<tr>
<td>Ratio female to male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of female</td>
<td></td>
<td></td>
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<tr>
<td>seats in local</td>
<td></td>
<td></td>
</tr>
<tr>
<td>government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Pressures</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Average annual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>urban population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent average</td>
<td></td>
<td></td>
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<tr>
<td>population change</td>
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</tbody>
</table>
exhibits weaker Coping Capacity in the areas of  and . The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.
Below are the four thematic areas with the weakest relative scores:

<table>
<thead>
<tr>
<th>HAZARD-SPECIFIC RISK (HSR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquake</td>
</tr>
<tr>
<td>Flood</td>
</tr>
<tr>
<td>Sea Level Rise</td>
</tr>
<tr>
<td>Storm Surge</td>
</tr>
<tr>
<td>Landslide</td>
</tr>
<tr>
<td>Wildfire</td>
</tr>
<tr>
<td>Tsunami</td>
</tr>
</tbody>
</table>

The scores and ranking are due to Vulnerability combined with Coping Capacity scores.
MULTI-HAZARD RISK (MHR)

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

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

- Multi-Hazard Exposure
- Vulnerability
- Coping Capacity
CAPITAL:
Area: km²

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR)** -
Score:  •  Rank: /

**RESILIENCE (R)** -
Score:  •  Rank: /

**MULTI-HAZARD EXPOSURE (MHE)** -
Score:  •  Rank: /

**VULNERABILITY (V)** -
Score:  •  Rank: /

**COPING CAPACITY (CC)** -
Score:  •  Rank: /

Population (2020 Estimate)
Population in poverty
Average years in school
Households with access to improved water
households
Infant mortality rate (per 1,000 live births)

*For more information on data and components please visit: https://bit.ly/2LqVoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: /  
SCORE: 

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- Earthquake
- Flood
- Landslide
- Storm Surge
- Sea Level Rise
- Wildfire
- Tsunami

National Disaster Preparedness Baseline Assessment: Panamá
VULNERABILITY (V)

Vulnerability in [province] is primarily driven by [drivers] and [drivers]. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

Environmental Stress

SCORE: 1

- Percent forest cover lost
- Density of livestock per sq. km
- Percent of freshwater consumption to production

Vulnerable Health Status

SCORE: 1

- Dengue incidence per 100,000 persons
- AIDS incidence per 100,000 persons
- Malaria Incidence per 100,000 persons
- TB incidence per 100,000 persons
- Prevalence of stunting
- Disability
- Maternal Mortality Rate per 100,000 live births
- Infant mortality per 1,000 live births
- Life expectancy

Clean Water Vulnerability

SCORE: 1

- Households without access to improved drinking water
- Households with access to improved sanitation

Information Access Vulnerability

SCORE: 1

- Households with radio
- Households with TV
- Households with internet
- School attendance rate
- Average years of schooling
- Illiteracy rate
**PROVINCE PROFILE**

**Economic Constraints**  
SCORE: 1  
RANK: ASSESSED

- Poverty rate
- Economic dependency ratio

**Gender Inequality**  
SCORE: 1  
RANK: ASSESSED

- Ratio female to male secondary enrollment
- Ratio female to male labor
- Proportion of female seats in local government

**Population Pressures**  
SCORE: 1  
RANK: ASSESSED

- Average annual urban population change
- Percent average population change
COPING CAPACITY (CC) exhibits weaker Coping Capacity in the areas of and . The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.

**Economic Capacity**
- Municipal income per capita (thousands of Balboas)
- Median monthly salary (Balboas)
- GDP per capita (Balboas)

**Governance**
- Households with public garbage collection
- Crime rate per 1,000 people
- Crime syndicate per 1,000 people
- Voter participation percentage

**Environmental Capacity**
- Protected area percentage
- Reforested area percentage

**Infrastructure Capacity**

**Health Care Capacity**
- Nurses per 10,000 people
- Physicians per 10,000 people
- Hospital beds per 10,000 people
- DPT3 immunization coverage
- Average distance to hospital (km)

**Transportation Capacity**
- Average distance to port or airport (km)
- Road density (km)

**Communications Capacity**
- Households with fixed phone
- Households with mobile phone

**Energy Capacity**
- Percent household connected to public electricity grid
RESILIENCE (R)

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

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

HAZARD-SPECIFIC RISK (HSR)

Earthquake

Flood

Sea Level Rise

Storm Surge

Landslide

Wildfire

Tsunami
MULTI-HAZARD RISK (MHR)

The score and ranking are due to Multi-hazard Exposure combined with Vulnerability and Coping Capacity scores.

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

- Multi-Hazard Exposure
- Vulnerability
- Coping Capacity

SCORE
COUNTRY SCORE
RECOMMENDATIONS

1
RECOMMENDATIONS
CAPITAL:
Area: km²

RISK AND VULNERABILITY COMPONENT SCORE

**MULTI-HAZARD RISK (MHR)** -
Score:  •  Rank: /

**RESILIENCE (R)** -
Score:  •  Rank: /

**MULTI-HAZARD EXPOSURE (MHE)** -
Score:  •  Rank: /

**VULNERABILITY (V)** -
Score:  •  Rank: /

**COPING CAPACITY (CC)** -
Score:  •  Rank: /

Population (2020 Estimate)
Population in poverty
Average years in school
Households with access to improved water households
Infant mortality rate (per 1,000 live births)

*For more information on data and components please visit: https://bit.ly/2LqYoUO*
MULTI-HAZARD EXPOSURE (MHE)

RANK: /  
SCORE:

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:

- Earthquake
- Flood
- Landslide
- Storm Surge
- Sea Level Rise
- Wildfire
- Tsunami
VULNERABILITY (V)

Vulnerability in [province] is primarily driven by [reasons]. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.

### Environmental Stress

- Percent forest cover lost
- Density of livestock per sq. km
- Percent of freshwater consumption to production

### Vulnerable Health Status

- Dengue incidence per 100,000 persons
- AIDS incidence per 100,000 persons
- Malaria Incidence per 100,000 persons
- TB incidence per 100,000 persons
- Prevalence of stunting
- Disability
- Maternal Mortality Rate per 100,000 live births

- Infant mortality rate per 1,000 live births
- Life expectancy

### Clean Water Vulnerability

- Households without access to improved drinking water
- Households with access to improved sanitation

### Information Access Vulnerability

- Households with radio
- Households with TV
- Households with internet
- School attendance rate
- Average years of schooling
- Illiteracy rate
**Economic Constraints**  
SCORE: 0  
RANK: / ASSESSED

- Poverty rate
- Economic dependency ratio

**Gender Inequality**  
SCORE: 0  
RANK: / ASSESSED

- Ratio female to male secondary enrollment
- Ratio female to male labor
- Proportion of female seats in local government

**Population Pressures**  
SCORE: 0  
RANK: / ASSESSED

- Average annual urban population change
- Percent average population change
exhibits weaker Coping Capacity in the areas of  and . The bar charts indicate the socioeconomic themes contributing to the overall Coping Capacity score.
RESILIENCE (R)

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

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

HAZARD-SPECIFIC RISK (HSR)

Earthquake

Flood

Sea Level Rise

Storm Surge

Landslide

Wildfire

Tsunami
MULTI-HAZARD RISK (MHR)

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

Multi-Hazard Exposure

Vulnerability

Coping Capacity

’s score and ranking are due to Multi-hazard Exposure combined with Vulnerability and Coping Capacity scores.
RECOMMENDATIONS
RECOMMENDATIONS