



PANAMÁ

---

# NGÄBE BUGLÉ

---

## NDPBA PROVINCES AND INDIGENOUS COMARCAS PROFILE

# PANAMÁ NGÄBE BUGLÉ

## CAPITAL: CHICHICA

Area: 6,814 km<sup>2</sup>

Comarca Ngäbe Buglé is located in the western region of Panama. This Province is divided into 9 districts: Buäbiti (The Capital), Besiko, Jirondai, Kankintú, Kusapín, Mirono, Münä, Nole, Duima, Nürün, Bledeshia. 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



Population (2020 Estimate)  
**224,823**



Population in poverty  
**81.9%**



Average years in school  
**5.3**



Access to improved water  
**36.7% households**



Infant mortality rate  
(per 1,000 live births)  
**17**

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



# MULTI-HAZARD EXPOSURE (MHE)

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



MHE  
0.562

Raw MHE  
0.617

Relative MHE  
0.508

## 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**



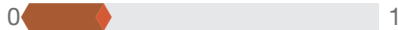
## VULNERABILITY (V)

**RANK: 1 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.712**

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



<b>0.23%</b> Percent forest cover lost	<b>33.72</b> Density of livestock per sq. km	<b>-</b> Percent of freshwater consumption to production
---	---	---



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



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



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



<b>36.7%</b> Households with access to improved drinking water	<b>39.3%</b> Households with access to improved sanitation
---	---



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



<b>52.9%</b> Households with radio	<b>8.0%</b> Households with TV	<b>11.2%</b> Households with internet	<b>83.1%</b> School attendance rate	<b>5.34</b> Average years of schooling	<b>24.6%</b> Illiteracy rate
---------------------------------------	-----------------------------------	--	--	---	---------------------------------



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



**81.9%** Poverty rate  
**0.88** Economic dependency ratio



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



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



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



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



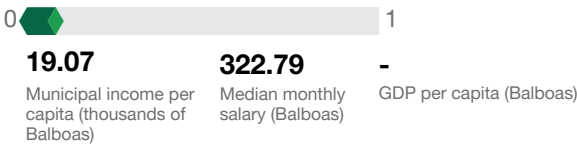
# COPING CAPACITY (CC)

**RANK: 13 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.194**

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



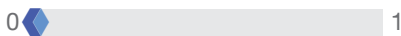
## Governance SCORE: 0.505 RANK: 7/0,505 PROVINCES AND INDIGENOUS COMARCAS ASSESSED



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



## 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



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



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



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





## RESILIENCE (R)

**RANK: 13 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.241**

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)



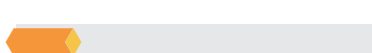
**Earthquake**



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



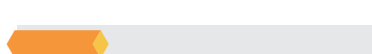
**Flood**



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



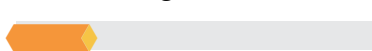
**Sea Level Rise**



**RANK: 6 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.250**



**Storm Surge**



**RANK: 5 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.219**



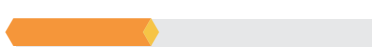
**Landslide**



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



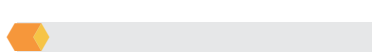
**Wildfire**



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



**Tsunami**



**RANK: 11 / 13 PROVINCES AND INDIGENOUS COMARCAS ASSESSED**  
**SCORE: 0.077**





## MULTI-HAZARD RISK (MHR)

**1 / 13**

RANK WITHIN PROVINCES AND  
INDIGENOUS COMARCAS  
SCORE: 0.693



Ngäbe Buglé's score and ranking are due to Medium Multi-hazard Exposure combined with Medium Vulnerability and Very Low Coping Capacity scores.6,814

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

NGÄBE BUGLÉ SCORE  
 COUNTRY SCORE



### Multi-Hazard Exposure



### Vulnerability



### Coping Capacity





---

# 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

## 2

### 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.

---

## NGÄBE BUGLÉ RECOMMENDATIONS

---

### 3

#### Communications Capacity

Ngäbe 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

## 4

### 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.

**Better solutions.  
Fewer disasters.**

# Safer world.

**1305 N Holopono Street  
Suite 2, Kihei, HI 9675 3**

**P: (080) 89 1-0525  
F: (080) 891-0526**



**@PDC\_Global**



**/PDCGlobal**



**www.pdc.prg**



**ndpba.tto@pdc.org**