



BELIZE

CAYO

NDPBA DISTRICTS PROFILE

BELIZE CAYO

CAPITAL: SAN IGNACIO

Area: 5,820 km²

The Cayo District is located in the Western region of Belize. This District is divided into 47 Cities, Towns and Villages: San Ignacio (The Capital), Belmopan, Benque Viejo del Carmen and Santa Elena and the main Cities and Towns. The District borders Guatemala to the west, Orange Walk to the north, Belize and Stann Creek to the east and Toledo to the south. The main economic sources for the country of Belize continues to be tourism, sugar, banana, citrus, marine products and crude oil.



RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - Very High
Score: 0.531 • Rank: 2/6



RESILIENCE (R) - High
Score: 0.515 • Rank: 3/6



MULTI-HAZARD EXPOSURE (MHE) - Extremely High
Score: 0.763 • Rank: 1/6



VULNERABILITY (V) - High
Score: 0.530 • Rank: 3/6



COPING CAPACITY (CC) - Very High
Score: 0.560 • Rank: 2/6



Population (2010 Census)
75,046



Population in lowest wealth quintile
21.1%



Population with no secondary school education
62.3%



Households with unimproved water access
6.87% households



Infant mortality rate (per 1,000 live births)
10.7

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



MULTI-HAZARD EXPOSURE (MHE)

RANK: 1 / 6 DISTRICTS
SCORE: 0.763



MHE
0.763

Raw MHE
1.000

Relative MHE
0.525

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:



Earthquake

0.0%

0

-

Critical Infrastructure Exposed:
0.0%



Extreme Heat

88.2%

75,352

\$1.2 Billion

Critical Infrastructure Exposed:
84.4%



Flood

17.8%

15,200

\$2 Billion

Critical Infrastructure Exposed:
20.0%



Landslide

4.2%

3,602

\$43 Million

Critical Infrastructure Exposed:
0.5%



Storm Surge

0.0%

0

-

Critical Infrastructure Exposed:
0.0%



Tropical Cyclone Winds

100.0%

85,402

\$6.7 Billion

Critical Infrastructure Exposed:
100.0%



Wildfire

91.9%

78,447

\$6.6 Billion

Critical Infrastructure Exposed:
91.7%



VULNERABILITY (V)

RANK: 3 / 6 DISTRICTS ASSESSED
SCORE: 0.530

Vulnerability in Cayo is primarily driven by Environmental Stress and Population Pressures. The bar charts indicate the socioeconomic themes contributing to the overall Vulnerability score.



Environmental Stress SCORE: 0.886 RANK: 2/6 DISTRICTS ASSESSED



19.8%

Tree cover loss

-7.3%

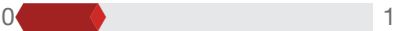
Projected changes in annual precipitation

37.4%

Decline in land productivity



Vulnerable Health Status SCORE: 0.217 RANK: 4/6 DISTRICTS ASSESSED



103.9

TB infections per 10k persons

155.84

Dengue incidence per 100k persons

536.36

Malaria incidence per 100k persons



Clean Water Vulnerability SCORE: 0.522 RANK: 4/6 DISTRICTS ASSESSED



6.87%

Households with unimproved water access

21.66%

Households with unimproved sanitation



Information Access Vulnerability SCORE: 0.481 RANK: 4/6 DISTRICTS ASSESSED



73.3%

Adult literacy

82.4

Primary to secondary school transition rate

19.9%

Working population with no secondary school education

19.9%

Households without radio access

22.0%

Households without television access

87.4%

Households without Internet access



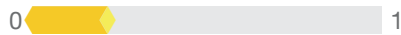
Economic Constraints SCORE: 0.632 RANK: 2/6 DISTRICTS ASSESSED



9.9% Average unemployment (2019)	27.9% Under-employment (2019)	72.2 Economic dependency ratio	21.1% Population in lowest wealth quintile
--	---	--	--



Gender Inequality SCORE: 0.218 RANK: 6/6 DISTRICTS ASSESSED



89.28 Domestic violence cases per 10k persons	0,246 Female economic opportunity score	4 Female economic opportunity rank	1.02 Female to male secondary school transition ratio	0.14 Female to male income ratio	0.30 Female to male labor force participation ratio	0.335 Female healthcare access score
5 Female healthcare access rank	10.7 Infant mortality rate (per 1,000 live births)	149.6 Maternal mortality rate (per 100k live births)	62.0 Adolescent birth rate (per 1,000 women)	28.3% Unmet need for contraception		



Population Pressures SCORE: 0.752 RANK: 1/6 DISTRICTS ASSESSED



3.56% Average annual population change	4.64% Average annual urban population change	12.80% Prevalence of stunting
--	--	---



COPING CAPACITY (CC)

RANK: 2 / 6 DISTRICTS ASSESSED
SCORE: 0.560

Cayo 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 SCORE: 0.526 RANK: 3/6 DISTRICTS ASSESSED



65.3%

Households owning homes

15.1%

Change in active tourism business

\$458.68

Average revenue per room (BZ\$)

\$1,242.97

Median monthly income (BZ\$)

64.08

Labor force participation rate

15.2%

Population in highest wealth quintile



Governance SCORE: 0.490 RANK: 3/6 DISTRICTS ASSESSED



79.7%

Voter participation

52.5%

Households with municipal garbage collection

31.38

Crime rate per 10k persons



Environmental Capacity SCORE: 1.000 RANK: 1/6 DISTRICTS ASSESSED



99.99%

Land area with low interannual water variability

55.2%

Percent protected land area



Infrastructure Capacity SCORE: 0.744 RANK: 1/6 DISTRICTS ASSESSED



Health Care Capacity SCORE: 0.375 RANK: 5/6 DISTRICTS ASSESSED

1.56

Health care centers per 10,000 persons

4.80

Physicians per 10,000 persons

10.39

Nurses per 10,000 persons

85.3%

Immunization coverage

7.80

Average distance to hospital (km)

8.26

Hospital beds per 10,000 persons



Transportation Capacity SCORE: 0.961 RANK: 1/6 DISTRICTS ASSESSED

0.7

Road density (km)

6.1

Average distance to port facility (km)



Communications Capacity SCORE: 0.719 RANK: 2/6 DISTRICTS ASSESSED

1.83 Average distance to cell tower (km)	17.8% Households with fixed phone	84.5% Households with mobile phone
--	---	--



Energy Capacity SCORE: 0.887 RANK: 2/6 DISTRICTS ASSESSED

91.3% Households with electricity	92.6% Households using gas for cooking
---	--



Emergency Services Capacity SCORE: 0.777 RANK: 1/6 DISTRICTS ASSESSED

1,270 Emergency shelter capacity per 10,000 persons	21.3 Average distance to warehouse (km)	1.6 Average distance to emergency shelter (km)	5.5 Average distance to fire station (km)	4.0 Average distance to police station (km)
---	---	--	---	---



RESILIENCE (R)

RANK: 3 / 6 DISTRICTS ASSESSED
SCORE: 0.515

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

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



Environmental Stress



Population Pressures



Governance



Economic Capacity



HAZARD-SPECIFIC RISK (HSR)



Earthquake

RANK: 3 / 6 DISTRICTS ASSESSED
SCORE: 0.000



Extreme Heat

RANK: 2 / 6 DISTRICTS ASSESSED
SCORE: 0.479



Flood

RANK: 2 / 6 DISTRICTS ASSESSED
SCORE: 0.247



Landslide

RANK: 3 / 6 DISTRICTS ASSESSED
SCORE: 0.264



Storm Surge

RANK: 5 / 6 DISTRICTS ASSESSED
SCORE: 0.000



Tropical Cyclone Winds

RANK: 1 / 6 DISTRICTS ASSESSED
SCORE: 0.460



Wildfire

RANK: 1 / 6 DISTRICTS ASSESSED
SCORE: 0.472



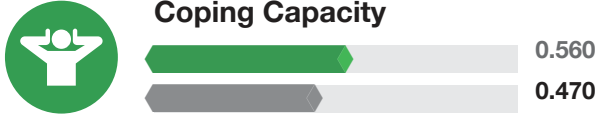
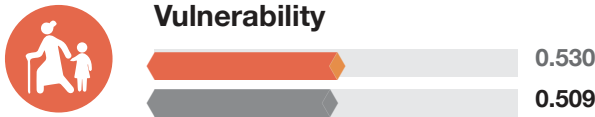
MULTI-HAZARD RISK (MHR)

2 / 6
RANK WITHIN DISTRICTS
SCORE: 0.531



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

Multi-hazard risk component scores compared to overall average country scores: █ █ CAYO SCORE █ COUNTRY SCORE



CAYO RECOMMENDATIONS



Environmental Stress

Belize ranks 2nd highest of the six districts for environmental stress. Driving this trend is the highest rates of tree cover loss in the country from 2000-2020 and the second highest values in percent of land area with declining productivity. Changing climate will be exacerbating these stresses and making agricultural lands more susceptible to temperature and precipitation extremes. Adopting Climate Smart Agricultural Practices (CSAs) and technologies can help reduce the need for further land clearing as well as maintaining or improving efficiencies in agricultural work (CIAT,2018). Crop rotations and changing plant density can be low cost ways to improve soil conditions and prevent erosion (CIAT,2018). Government incentives for sustainable farming, including more equitable access to credit and purchasing options can allow for environmental conservation efforts when land productivity needs long term maintenance.

Cayo also has the highest percentage of protected land of all the districts and has very low levels of interannual water variability. Capitalizing on the stability of its reserves and protected areas and long term agricultural planning can help to lessen the burden of climate change. Environmental protection is vital to ensuring sustainable development within Cayo.

CAYO RECOMMENDATIONS

2

Population Pressures

Cayo ranks the highest in population pressures of the six districts in Belize. Contributing to the high score is high amounts of annual population change and urban population change in the district. High rates of migration into or out of urban centers can strain government services, making planning difficult for disasters. Sharp rises in population growth can exacerbate poverty and lead to the degradation of the environment (Ministry of Natural Resources and Agriculture, 2012). Slowing population growth can alleviate stress on the environment and build on sustainable development goals (Ministry of Natural Resources and Agriculture, 2012).

While it may be difficult to reduce the physical numbers of people moving in and out of the area, recognizing and planning for the strain that this puts onto services, infrastructure and natural resources will be important, especially during disasters. 91% of Cayo's population is exposed to wildfire hazards and 88% to extreme heat hazards. Both hazards will likely increase in likelihood with the changing climate. Disaster management planning and investment for sufficient shelters, emergency services and routes, as well as other critical infrastructure like hospitals and schools will help to alleviate these pressures on society and the natural environment.

CAYO RECOMMENDATIONS

3

Governance

Cayo ranks 3rd of 6 districts in Governance. Contributing to the score is lower rates of voter participation. This can mean disillusionment, indifference with the government, or lack of faith in government functions. Cayo additionally has the highest rates of unemployment as well as the second highest economic dependency ratio. Lack of confidence in economic and social programs due to economic hardship can lead to other social issues like rising crime, poverty, and declining education.

Work to build faith in the citizens through community outreach and education programs to increase civic participation. Develop social programs that create community in the predominant economies like agriculture and tourism.

CAYO RECOMMENDATIONS

4

Economic Capacity

Cayo scores third in economic capacity. Cayo shows the second lowest increase in tourism businesses in the country while maintaining a higher than average rate per accommodation room than other districts. It also has the third lowest labor force participation rate. Low economic capacity can exacerbate access to adequate health care, food stability, proper nutrition, and strain the environment and social services.

Cayo has only 15% of its population in the highest wealth quintile, meaning that the majority of its population is economically vulnerable. Evaluate disaster response and recovery plans to ensure the inclusion of these populations in long- and short-term recovery processes. Additionally, 30% of Cayo's capital stock is exposed to floods, and nearly 100% is exposed to wildfire and hurricane force winds.

Review and incentivize short term economic activities that could help to maintain economic viability, food security and nutrition requirements in the event of natural disasters. Analyze if nutritional needs are being met and that in the case of disaster nutritional requirements are planned for. Create public policies guaranteeing equal opportunity and fair wages for all. Assess feasibility of government programs to assist in job creation and economic growth through education and short-term assistance designed to promote self-sustaining economic opportunities and decrease long-term reliance on government programs.

**Better solutions.
Fewer disasters.**

Safer world.

**1305 N Holocono 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