



THE PHILIPPINES

BULACAN

NDPBA PROVINCE PROFILE

THE PHILIPPINES

BULACAN

CAPITAL: CITY OF MALOLOS

Area: 2,784 km²

Bulacan is just north of Manila, on the northeastern shore of Manila Bay. The topography of Bulacan ranges from flat to rugged terrain owing to the mountainous and hilly landscapes to the east and lowlands to the west. The province is heavily populated and is one of the fastest growing provinces in the region. Bulacan is an industrialized province with good infrastructure, often known as the “gateway to northern Luzon” because of its Expressway and Manila North Road. The population is highly exposed to seismic and typhoon hazards. Flood hazards are also significant and in 2018 between July and August several storms and depressions resulted in flooding along with other impacts to Bulacan among other provinces.



RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - Medium

Score: 0.512 • Rank: 35/84



RESILIENCE (R) - Very High

Score: 0.623 • Rank: 14/84



MULTI-HAZARD EXPOSURE (MHE) - Very High

Score: 0.783 • Rank: 14/84



VULNERABILITY (V) - Very Low

Score: 0.302 • Rank: 82/84



COPING CAPACITY (CC) - Medium

Score: 0.548 • Rank: 49/84



Population (2018)

3,049,664



Population in Poverty

3.5%



Literate population

99.6%



Access to improved water

91.2%



Average life expectancy

70.7 years

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



MULTI-HAZARD EXPOSURE (MHE)

RANK: 14 / 84 PROVINCES
SCORE: 0.783



MHE
0.783

Raw MHE
0.856

Relative MHE
0.709

ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:



Earthquake

100%

3,046,986
\$13.1 Billion



Tsunami

<1%

3,864
\$5.2 Million



Flood

76%

2,315,664
\$10.5 Billion



Liquefaction

49%

1,505,029
\$7.4 Billion



Landslide

1%

40,519
\$27.2 Million



Volcano

<1%

9,146
\$39.2 Million



Drought

<1%

8,088
\$970,487



Wildfire

15%

459,719
\$2.9 Billion



Storm Surge

4%

133,976
\$2 Billion



Typhoon Winds

100%

3,049,630
\$13.1 Billion




VULNERABILITY (V)

RANK: 82 / 84 PROVINCES ASSESSED
SCORE: 0.302

Vulnerability in Bulacan is primarily driven by Environmental Stress and Population Pressures. The bar chart indicates the socioeconomic themes contributing to the province's overall Vulnerability score.



Environmental Stress

0  1 **SCORE: 0.509** **RANK: 35/84 PROVINCES ASSESSED**

10.3 **0** **-0.18%**
 Livestock density Barren land (per 10k hectares) Forest cover change



Vulnerable Health Status

0  1 **SCORE: 0.281** **RANK: 77/84 PROVINCES ASSESSED**

9.0% **2.77** **24.1** **70.69** **104**
 Malnutrition among children (0 to 5 years old) Infant mortality rate (per 1k live births) Maternal mortality rate (per 100k live births) Life expectancy Disability (per 100k persons)

18.2 **0.5** **3.5** **0.7**
 Tuberculosis mortality rate (per 100k persons) HIV mortality rate (per 100k persons) Intestinal disease mortality rate (per 100k persons) Other arthropod-borne viral fevers and viral hemorrhagic fever mortality rate (per 100k persons)



Clean Water Vulnerability

0  1 **SCORE: 0.285** **RANK: 66/84 PROVINCES ASSESSED**

91.2% **95.4%**
 Households with improved safe water source Households with sanitary toilet facility



Information Access Vulnerability

0  1 **SCORE: 0.222** **RANK: 80/84 PROVINCES ASSESSED**

99.58% **106.28%** **11.99%** **73.76%** **92.06%**
 Literacy rate (age 10 and older) Gross primary school enrollment rate Internet Access Households with radio Households with television



Economic Constraints



SCORE: 0.108 **RANK: 80/84** PROVINCES ASSESSED

0.51
Economic
dependency
ratio

3.45%
Poverty
incidence



Gender Inequality



SCORE: 0.274 **RANK: 74/84** PROVINCES ASSESSED

1.06
Female to male
secondary school
enrollment Rate

0.59
Labor force
participation ratio



Population Pressures



SCORE: 0.437 **RANK: 30/84** PROVINCES ASSESSED

2.28
Population
growth rate
(2010-2015)

5.48
Average annual
urban population
growth rate

1.4%
Informal settlers




COPING CAPACITY (CC)

RANK: 49 / 84 PROVINCES ASSESSED
SCORE: 0.548

Bulacan exhibits weaker Coping Capacity in the areas of Emergency Services Capacity and Economic Capacity. The bar chart indicates the socioeconomic themes contributing to the province's overall Coping Capacity score.




Economic Capacity

0  1 **SCORE: 0.482** **RANK: 52/84 PROVINCES ASSESSED**

0.89 Purchasing power of the peso	64.60% Labor force participation rate	1048.36 Local government annual regular income per capita (Philippine Peso)
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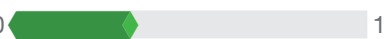
Governance

0  1 **SCORE: 0.559** **RANK: 66/84 PROVINCES ASSESSED**

83.6% Voter participation	22.69 Organized violence (per 100k persons)	66.53% Garbage pickup
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Environmental Capacity

0  1 **SCORE: 0.332** **RANK: 50/84 PROVINCES ASSESSED**

1.36 Protected areas (per 1k ha)	10.4% Forest reserves
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Infrastructure Capacity

0 1 **SCORE: 0.673** **RANK: 15/84** PROVINCES ASSESSED



Health Care Capacity **SCORE: 0.613** **RANK: 18/84** PROVINCES ASSESSED

8.49	3	66.05%	2.47
Hopital beds (per 10k people)	Physicians per 10,000 people	Vaccination coverage	Average distance to nearest hospital (km)



Transportation Capacity **SCORE: 0.674** **RANK: 16/84** PROVINCES ASSESSED

2.44	19.03
Road density (km per sq. km)	Average distance to nearest port (km)



Communications Capacity **SCORE: 0.888** **RANK: 5/84** PROVINCES ASSESSED

9.0%	99.5%
Households with a landline	Mobile coverage



Energy Capacity **SCORE: 0.96** **RANK: 4/84** PROVINCES ASSESSED

95.7%	67.3%
Households with electricity	Households with gas



Emergency Services Capacity **SCORE: 0.233** **RANK: 74/84** PROVINCES ASSESSED

8.46	0.87	1.48
Evacuation centers (per 100k persons)	Fire Stations (per 100k persons)	Fire Trucks (per 100k persons)



RESILIENCE (R)

RANK: 14 / 84 PROVINCES ASSESSED
SCORE: 0.623

Bulacan’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:



Environmental Stress



Population Pressures



Emergency Services Capacity



Economic Capacity



HAZARD-SPECIFIC RISK (HSR)



Earthquake

RANK: 12 / 84 PROVINCES ASSESSED
SCORE: 0.360



Tsunami

RANK: 34 / 84 PROVINCES ASSESSED
SCORE: 0.089



Flood

RANK: 8 / 84 PROVINCES ASSESSED
SCORE: 0.325



Liquefaction

RANK: 20 / 84 PROVINCES ASSESSED
SCORE: 0.254



Landslide

RANK: 80 / 84 PROVINCES ASSESSED
SCORE: 0.061



Volcano

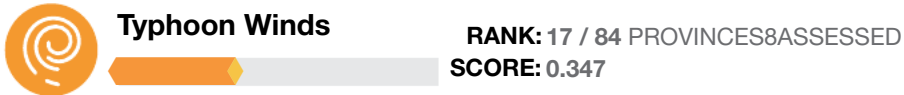
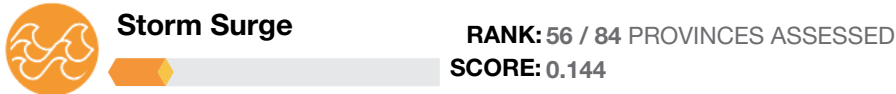
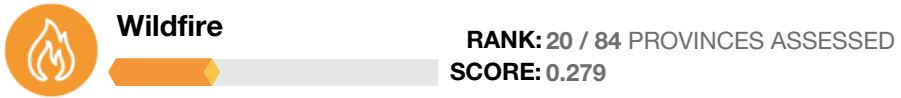
RANK: 37 / 84 PROVINCES ASSESSED
SCORE: 0.118



Drought

RANK: 56 / 84 PROVINCES ASSESSED
SCORE: 0.064

(HAZARD-SPECIFIC RISK CONTINUED)



MULTI-HAZARD RISK (MHR)

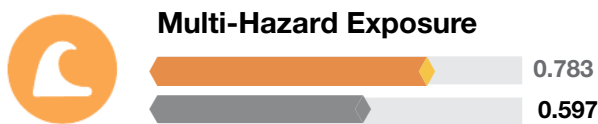
35 / 84
RANK WITHIN PROVINCES
Score: 0.512



Bulacan’s score and ranking are due to Very High Multi-hazard exposure combined with Very Low Vulnerability and Medium Coping Capacity scores.

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

PROVINCE SCORE
COUNTRY SCORE



BULACAN RECOMMENDATIONS

1

Environmental Stress

- Bulacan is ranked 3rd highest in the Philippines for livestock density. Work with farmers and provide them with the necessary tools and knowledge to be able to rear livestock sustainably.
- In Bulacan, nearly 75% of the population is exposed to flooding hazards. Promote greening and reforestation projects, as well as sustainable agricultural practices to help mitigate the impacts of flooding.

2

Population Pressures

- Continue to monitor the growth of the population and plan resource allocation appropriately. Work with diverse partners to help stimulate the economy to support increased public demands. Ensure equitable distribution of resources and services.
- Environmental stress is already leading to vulnerabilities in Bulacan. Enforce building codes and environmental protection laws to ensure expansion is sustainable. Also, focus efforts on bringing in funds and innovations for enhancing the built environment.

3

Emergency Services Capacity

- Population pressures in Bulacan are increasing the need to expand emergency service capacity. As the population grows, there is an increased demand on the already limited resources and space in evacuation shelters. Increase the number of evacuation centers, fire stations and fire trucks to serve the population and increase emergency service capacity.
- Continue to support evidence-based preparedness and response coordination, including the provision of emergency equipment and supplies. Additionally, increase efforts to have a central database that makes sub-national data on disaster management capabilities and resources more accessible. Increasing transparency through sharing data will ensure efficient and effective coordination at all levels of government, as well as with partners.

4

Economic Capacity

- Bulacan ranked 52nd out of the 84 territories in economic capacity. Local government annual regular income in Bulacan is 1,048.4 pesos per capita, the 14th lowest in the Philippines. Continue to encourage programs that diversify the economy in Bulacan to generate public revenue and create new job opportunities. Pursue policies that balance inflation rates and create equal opportunities for employment.
- As the population grows, there will be increases in the demands for emergency services and public programs. Work with stakeholders and partners to expand emergency service capacities by training community members and generating funds to support response activities.

**Better solutions.
Fewer disasters.**

Safer world.

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