



INDONESIA

BALI

NDPBA PROVINCE PROFILE

BALI

CAPITAL: DENPASAR

Area: 5,780 km²

With a mountainous geography dominated by active volcanoes and the verdant agricultural and cultural hearth of Ubud, the Balinese economy is dominated by tourism

and its all-hazards resilience efforts have been informed by its socio-cultural aspects. For example, it is the only Hindu-majority province in Indonesia. Whilst Bali and its capital, Denpasar, have lower levels of vulnerability, multi-hazard risk and exposure, disaster management capabilities should be enhanced as tourism in an age of COVID19 will add further complexities to both the public health and tourism infrastructures. Historically, there have been frequent earthquakes, tsunami run-ups, and volcanic events in Bali. Given it's role as a tourism and global convening center, both climate change and DRR have been addressed via the Bali Action Plan beginning in 2007.



RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - Very Low

Score: 0.381 • Rank: 31/34



RESILIENCE (R) - Very High

Score: 0.608 • Rank: 3/34



MULTI-HAZARD EXPOSURE (MHE) - Low

Score: 0.349 • Rank: 27/34



VULNERABILITY (V) - Very Low

Score: 0.321 • Rank: 33/34



COPING CAPACITY (CC) - Very High

Score: 0.639 • Rank: 2/34



DISASTER MANAGEMENT CAPABILITIES (DMC) - Low

Score: 0.506 • Rank: 20/34



Population (2020 Projected)

4,380,800



Population in Poverty

3.6%



Adult Literacy Rate

94.5%



Access to improved water

96.8%



Average life expectancy

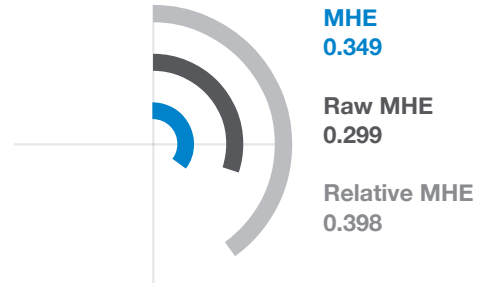
72.0 years

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



MULTI-HAZARD EXPOSURE (MHE)

RANK: 27 / 34 PROVINCES
SCORE: 0.349



ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:



Earthquake

57%

2,412,922
\$12.3 Billion



Tsunami

4%

165,742
\$838.6 Million



Flood

25%

1,036,977
\$5.31 Billion



Flash Flood

3%

116,863
\$584.7 Million



Landslide

3%

138,170
\$669.8 Million



Volcano

11%

478,914
\$2.4 Billion



Drought

14%

590,674
\$2.9 Billion



Wildfire

4%

166,972
\$811.4 Million



Extreme Weather

99%

4,161,265
\$20.9 Billion



VULNERABILITY (V)

RANK: 33 / 34 PROVINCES ASSESSED
SCORE: 0.321

Vulnerability in Bali is primarily driven by Information Access Vulnerability and Environmental Stress. The bar charts indicate the socioeconomic themes contributing to the province's overall Vulnerability score.



Environmental Stress

SCORE: 0.455 RANK: 8/34 PROVINCES ASSESSED

8.0%	263.84	99.5
Land susceptible to severe erosion	Livestock Density (per sq km)	Net Deforestation (hectares per year)



Vulnerable Health Status

SCORE: 0.239 RANK: 32/34 PROVINCES ASSESSED

71.99	29	47.32	6.3%	9.6%	3.2%	1.4%
Life expectancy (years)	Infant mortality rate (per 1,000 live births)	Maternal mortality ratio	Children (under 5) Wasting	Disability	Unmet health care needs	Households with limited access to health facility
1.7%	21.06	11.18	0.01	89	186.15	0.31
Households with catastrophic health expenditure	Dengue incidence per 100,000 population	Measles incidence per 100,000 population	Malaria incidence per 100,000 population	TB case notification per 100,000 population	HIV & AIDS incidence per 100,000 population	Prevalence of Leprosy per 10,000 population



Clean Water Vulnerability

SCORE: 0.037 RANK: 33/34 PROVINCES ASSESSED

96.8%	94.6%
Households with improved water	Households with improved sanitation



Information Access Vulnerability

SCORE: 0.483 RANK: 14/34 PROVINCES ASSESSED

94.5%	96.8%	8.84	79.6%
Adult literacy rate	Net primary school enrollment rate	Average years of schooling	Household using internet



Economic Constraints

SCORE: 0.175 RANK: 33/34 PROVINCES ASSESSED

1.5%	43.3	3.6%	0.366
Unemployment rate	Age dependency ratio	Poverty rate	GINI ratio



Gender Inequality

SCORE: 0.446 RANK: 24/34 PROVINCES ASSESSED

0.94	0.81	0.98	9.1%
Female to male literacy rate	Female to male labor ratio	Female to male secondary school enrollment ratio	Percent female seats in government



Population Pressures

SCORE: 0.416 RANK: 18/34 PROVINCES ASSESSED

1.2%	3.1%
Average annual total population change	Average annual urban population change



COPING CAPACITY (CC)

RANK: 2 / 34 PROVINCES ASSESSED
SCORE: 0.639

Bali exhibits weaker Coping Capacity in the areas of Economic Capacity and Energy Capacity. The bar charts indicate the socioeconomic themes contributing to the province's overall Coping Capacity score.



Economic Capacity

SCORE: 0.592 RANK: 5/34 PROVINCES ASSESSED

73.9% Labor force participation	2,988,555 Average monthly income (IDR)	38.1 GDP per capita (Million IDR)
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Governance

SCORE: 0.715 RANK: 2/34 PROVINCES ASSESSED

76 Crime rate per 100,000 population	74.9% Crime clearance rate	83.6% Voter participation
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Environmental Capacity

SCORE: 0.140 RANK: 28/34 PROVINCES ASSESSED

3.8%
Protected area



Infrastructure Capacity

SCORE: 0.777 RANK: 2/34 PROVINCES ASSESSED



Health Care Capacity SCORE: 0.734 RANK: 2/34 PROVINCES ASSESSED

15.4 Hospital beds per 10,000 people	8.08 Physicians per 10,000 people	17.59 Nurses and midwives per 10,000 people	12.0% Time to public hospital (over 1 hour)	64.8% Immunization rate (children under 5)	91.9% Health care accreditation rate	80.1% Population covered by health insurance
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Transportation Capacity SCORE: 0.888 RANK: 2/34 PROVINCES ASSESSED

2.07 Road and rail density	16.16 Average distance to port or airport
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Communications Capacity SCORE: 0.845 RANK: 5/34 PROVINCES ASSESSED

69.6% Mobile phone ownership	3.5% Households with Fixed Phones
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Energy Capacity SCORE: 0.640 RANK: 12/34 PROVINCES ASSESSED

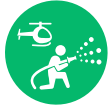
99.9% Households served by state electricity	1.1% Percentage of total national electricity generated in province	71.25 Electricity generation GWh per 100,000 Population	78.1% Households with gas for cooking
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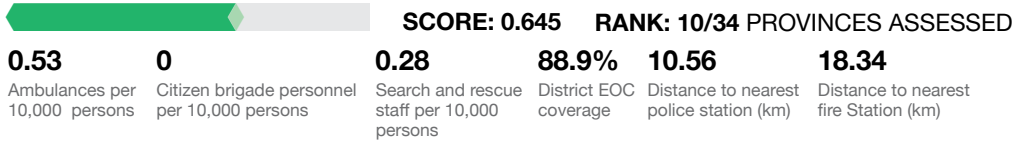
DISASTER MANAGEMENT CAPABILITIES (DMC)

RANK: 20 / 34 PROVINCES ASSESSED
SCORE: 0.639

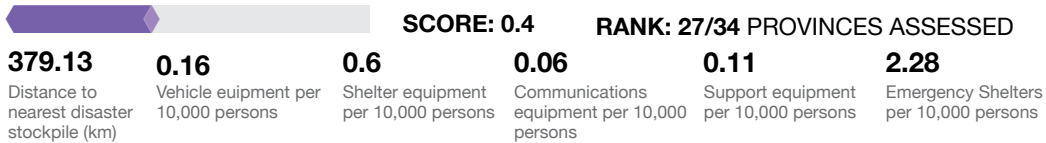
Bali exhibits weaker Disaster Management Capabilities in the areas of Mass Care Support and Early Warning and Monitoring. The bar charts indicate the disaster management themes contributing to the province’s overall Disaster Management Capabilities score.



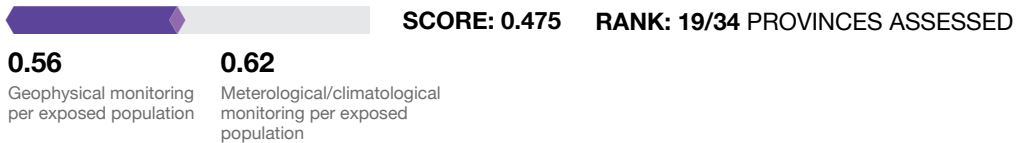
Emergency Services



Mass Care Support



Early Warning and Monitoring





RESILIENCE (R)

RANK: 3 / 34 PROVINCES ASSESSED
SCORE: 0.608

Bali's Very High Resilience score and ranking are due to Very Low Vulnerability combined with Very High Coping Capacity, and Low Disaster Management Capabilities scores.

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



Information Access Vulnerability



Environmental Stress



Economic Capacity



Energy Capacity



Mass Care Support



Early Warning and Monitoring



HAZARD-SPECIFIC RISK (HSR)



Earthquake

RANK: 25 / 34 PROVINCES ASSESSED
SCORE: 0.167



Tsunami

RANK: 22 / 34 PROVINCES ASSESSED
SCORE: 0.174



Flood

RANK: 32 / 34 PROVINCES ASSESSED
SCORE: 0.121



Flash Flood

RANK: 26 / 34 PROVINCES ASSESSED
SCORE: 0.133



Landslide

RANK: 29 / 34 PROVINCES ASSESSED
SCORE: 0.146



Volcano

RANK: 13 / 34 PROVINCES ASSESSED
SCORE: 0.239



Drought

RANK: 33 / 34 PROVINCES ASSESSED
SCORE: 0.105



Wildfire

RANK: 32 / 34 PROVINCES ASSESSED
SCORE: 0.124



Extreme Weather

RANK: 31 / 34 PROVINCES ASSESSED
SCORE: 0.187



MULTI-HAZARD RISK (MHR)

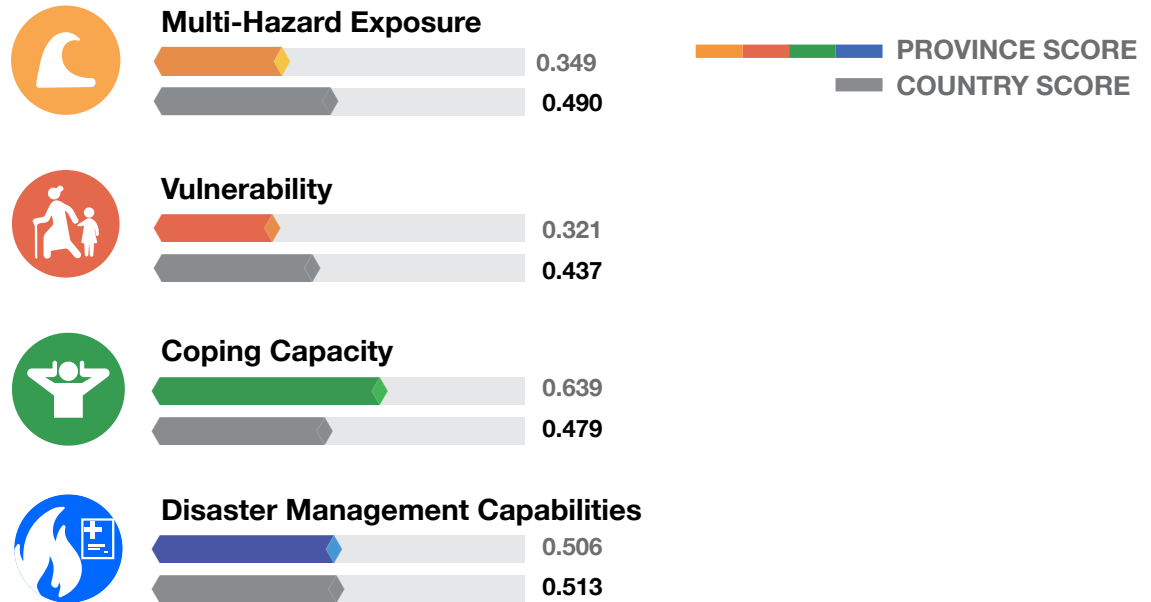
31 / 34

RANK WITHIN PROVINCES
Score: 0.381



Bali's Very Low Multi-hazard Risk score and ranking are due to Low Multi-hazard exposure combined with Very Low Vulnerability, Very High Coping Capacity, and Low Disaster Management Capabilities scores.

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



BALI RECOMMENDATIONS

1

Information Access Vulnerability

Bali has the 14th highest Information Access Vulnerability, driven by the 9th lowest Net Enrollment in Primary School (96.81%) and the 9th lowest Adult Literacy (94.53%).

Prioritize investments in education infrastructure, educational resources and personnel to improve attendance and completion rates.

2

Environmental Stress

Bali has the 8th highest Environmental Stress ranking, driven primarily by the 3rd highest Livestock Density (264 animals per square km) in the country. Heavy grazing can cause environmental degradation, which in turn exacerbates hazard impacts such as flooding and erosion.

In areas prone to erosion, prevent overgrazing of pastures by reducing herd size on available hectareage.

Reduce access of grazing animals to streams and rivers, where high animal traffic can destroy the integrity of riverbanks and pollute water sources.

BALI RECOMMENDATIONS

3

Economic Capacity

Though Bali has a relatively high Economic Capacity ranking 5th out of all provinces, lower economic capacity is evident in terms of Average Monthly Income and GDP per Capita. Largely dependent upon the tourism industry, Bali has seen significant economic impacts as a result of COVID-19. Assistance programs are needed to help entrepreneurs and small businesses expand as the population formerly employed in the service industry turns to informal labor options such as agriculture and fishing.

Increase access to financing and support structures (e.g. microfinance services and loans) to build the entrepreneurial and technical skills of small business owners and household enterprises.

4

Energy Capacity

Bali ranks 12th for overall Energy Capacity. Expand existing energy generation and distribution infrastructure to build resilience in energy supply and limit service gaps.

BALI RECOMMENDATIONS

5

Mass Care Support

Bali has the 8th lowest ranking for overall Mass Care Support capabilities, with the 9th lowest Disaster Equipment ranking, and the 9th lowest ranking for proximity to the nearest Disaster Stockpile (132 km away).

Given Bali's exposure to numerous hazards and typical influx of visitors, resources for Mass Care during a disaster are in short supply.

As Bali's tourism-based economy recovers, consider augmenting existing disaster equipment supplies, strategically locating disaster stockpiles, and assessing shelter capacities to better meet the needs of residents and visitors during a disaster.

6

Early Warning and Monitoring

Bali ranks 19th for overall Early Warning and Monitoring capabilities. As a hazard prone province and popular tourist destination, consider ways to increase multi-cultural and multi-lingual accessibility and understanding of hazard alerts and warning information to encourage life-saving actions.

**Better solutions.
Fewer disasters.**

Safer world.

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