

**INDONESIA** 

# JAWA TENGAH

# NDPBA PROVINCE PROFILE



# **JAWA TENGAH**

**CAPITAL: SEMARANG** 

Area: 32,801

 $\,\mathrm{km}^2$ 

Jawa Tengah (Central Java) is the third-most populous province in both Java and Indonesia after West Java and East Java with nearly 35 million inhabitants. Large earthquakes,



resultant tsunamis and volcanic events are a common fixture across Central Java and local, provincial and national (BNPB) authorities have collaborated to ensure both environmental and cultural heritage concerns are addressed via their DRR efforts. With high levels of hazard exposure and environmental and developmental stress, Jawa Tengah will benefit from enhanced early-warning systems and expanded access to information by all stakeholders.

#### **RISK AND VULNERABILITY**

#### **COMPONENT SCORE**



#### **MULTI-HAZARD RISK (MHR) - Moderate**

Score: 0.510 · Rank: 13/34



#### **RESILIENCE (R) - High**

Score: 0.534 · Rank: 11/34



#### **MULTI-HAZARD EXPOSURE (MHE) - High**

Score: 0.639 · Rank: 8/34



#### **VULNERABILITY (V) - Low**

Score: 0.406 · Rank: 23/34



#### **COPING CAPACITY (CC) - Moderate**

Score: 0.485 · Rank: 15/34



# **DISASTER MANAGEMENT CAPABILITIES (DMC) - Moderate**

Score: 0.521 · Rank: 17/34



Population (2020 Projected)

34,940,100



**Population in Poverty** 

10.6%



**Adult Literacy Rate** 

93.5%



Access to improved water

93.8%



Average life expectancy

**74.2** years

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



## **MULTI-HAZARD EXPOSURE (MHE)**

**RANK: 8 / 34 PROVINCES** 

**SCORE: 0.639** 



MHE 0.639

Raw MHE 0.822

Relative MHE 0.455

#### **ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:**



**Earthquake** 

44%

**♣** 15,055,921 \$77.7 Billion



Flood

45%

**\$ 15,452,010** \$81.54 Billion



Landslide

2%

**2** 799,821 \$2.7 Billion



**Drought** 

**39%** 

**▲** 13,375,656 \$61.4 Billion



**Extreme Weather** 

89%

**♣** 30,547,464 \$153.1 Billion



Tsunami

<1%

**\$ 146,090** \$811.6 Million



Flash Flood

4%

♣ 1,352,043 \$6.8 Billion



Volcano

4%

**1**,334,496 \$5.6 Billion



Wildfire

3%

**1**,029,040 \$3.5 Billion



# **VULNERABILITY (V)**

**RANK: 23 / 34 PROVINCES ASSESSED** 

**SCORE: 0.406** 

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



#### **Environmental Stress**

SCORE: 0.579 RANK: 5/34 PROVINCES ASSESSED

16.5% 261.09

Land susceptible to Livestock Density severe erosion (per sq km)

2004.7 Net Deforestation

(hectares per year)



#### **Vulnerable Health Status**

SCORE: 0.329 RANK: 26/34 PROVINCES ASSESSED

population

74.23 32 124.11 8.5% 8.6% 4.8% 4.9%

Life expectancy (years) Infant mortality rate (per 1,000 live births) Maternal (per 1,000 live births) Maternal (bildren (under Disasbility Unmet health (per 1,000 live births) Maternal (per 1,000 l

2.7% 9.08 1.37 0.01 197 29.32 0.52

Malaria incidence HIV & AIDS Households with Dengue incidence Measles incidence TB case Prevalence of catastrophic health per 100,000 per 100.000 per 100,000 notification incidence per Leprosy per per 100,000 10,000 population 100,000 population expenditure population population population

Clean Water Vulnerability

SCORE: 0.305 RANK: 28/34 PROVINCES ASSESSED

93.8% 80.3%

Households with Households with improved improved water sanitation

Information Access Vulnerability

2007 2 700 PANK 2/24 PROVINCES ASSESSED

93.5% 97.8% 7.53 75.2% PROVINCES ASSESSED

Adult literacy rate Net primary school Average years of Household enrollment rate schooling using internet



#### **Economic Constraints**

SCORE: 0.406 RANK: 16/34 PROVINCES ASSESSED

4.5% 47.7 10.6% 0.361
Unemployment Age dependency Poverty rate GINI ratio

Gender Inequality

SCORE: 0.482 RANK: 18/34 PROVINCES ASSESSED

0.94 0.7 1.07 22.0%

Female to male Ilteracy rate Ilder ratio Female to male Female to male Secondary school Seats in Enrollment ratio Iller ratio Female to male Secondary school Seats in Enrollment ratio Iller Secondary Second



SCORE: 0.176 RANK: 33/34 PROVINCES ASSESSED

0.8% 2.1%

Average annual total population change Average annual urban population change



## **COPING CAPACITY (CC)**

**RANK: 15 / 34 PROVINCES ASSESSED** 

**SCORE: 0.485** 

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



#### **Economic Capacity**

**SCORE: 0.277 RANK: 26/34 PROVINCES ASSESSED** 

68.6%

27.6

Labor force participation

2,190,251

Crime clearance

Average monthly income (IDR)

GDP per capita (Million IDR)



#### Governance

Crime rate per 100,000

**SCORE: 0.668 RANK: 9/34 PROVINCES ASSESSED** 

27 76.5% 80.2%

> Voter participation

#### **Environmental Capacity**

SCORE: 0 **RANK: 34/34 PROVINCES ASSESSED** 

0.5%

population

Protected area



#### Infrastructure Capacity

SCORE: 0.671 RANK: 6/34 PROVINCES ASSESSED



**Health Care Capacity** SCORE: 0.554 RANK: 11/34 PROVINCES ASSESSED

14.4% 62.2% 93.4% 76.9% 2.93 12.89 11.5

Hospital beds per

Health care

Population covered

10,000 people

Nurses and midwives Physicians per 10,000 people per 10,000 people

Time to public hospital (over 1 hour)

Immunization rate (children under 5)

accreditation rate

by health insurance



**Transportation Capacity** SCORE: 0.615 RANK: 8/34 PROVINCES ASSESSED

0.87

28.88

Road and rail density

Average distance to port or airport



Communications Capacity SCORE: 0.674 RANK: 10/34 PROVINCES ASSESSED

61.7%

2.1%

Mobile phone ownership

Households with Fixed Phones



**Energy Capacity SCORE: 0.841 RANK: 5/34 PROVINCES ASSESSED** 

99.8%

14.7%

118.29

82.5%

Households served by state electricity

Percentage of total national electricity gererated in province Electricity generation GWh per 100,000 Population

Households with gas for

cooking



# **DISASTER MANAGEMENT CAPABILITIES (DMC)**

**RANK: 17 / 34 PROVINCES ASSESSED** 

**SCORE: 0.485** 

Jawa Tengah exhibits weaker Disaster Management Capabilities in the areas of Early Warning and Monitoring and Emergency Services. The bar charts indicate the disaster management themes contributing to the province's overall Disaster Management Capabilities score.



#### **Emergency Services**

**SCORE: 0.695 RANK: 2/34 PROVINCES ASSESSED** 

0.65 0.03 45.8 0.31 89.2% 11.8

Search and rescue District EOC Distance to nearest Distance to nearest Ambulances per Citizen brigade personnel 10,000 persons per 10,000 persons staff per 10,000 coverage police station (km) fire Station (km) persons



#### **Mass Care Support**

SCORE: 0.725 **RANK: 2/34 PROVINCES ASSESSED** 

60.27 1.61 0.18 0.41 2.66 0.36

Distance to Vehicle euipment per Shelter equipment Communications Support equipment **Emergency Shelters** equipment per 10,000 per 10,000 persons nearest disaster 10,000 persons per 10,000 persons per 10,000 persons stockpile (km)



#### **Early Warning and Monitoring**

SCORE: 0.144 **RANK: 32/34 PROVINCES ASSESSED** 

0.17 0.22

Meterological/climatological Geophysical monitoring monitoring per exposed per exposed population population

**PDC** Global www.pdc.org



## **RESILIENCE (R)**

**RANK: 11 / 34 PROVINCES ASSESSED** 

**SCORE: 0.534** 

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

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













Environmental Stress

Information Access Vulnerability

Economic Capacity

Health Care Capacity

Early Warning and Monitoring

Emergency Services



## **HAZARD-SPECIFIC RISK (HSR)**



Earthquake

RANK: 15 / 34 PROVINCES ASSESSED

SCORE: 0.254



Tsunami

**RANK: 18 / 34 PROVINCES ASSESSED** 

SCORE: 0.186



Flood

**RANK: 7 / 34 PROVINCES ASSESSED** 

SCORE: 0.278



Flash Flood

**RANK: 8/34 PROVINCES ASSESSED** 

SCORE .249



Landslide

**RANK: 15/34 PROVINCES ASSESSED** 

SCORE).217



Volcano

**RANK: 6 / 34 PROVINCES ASSESSED** 

SCORE: 0.289



**Drought** 

RANK: 9/34 PROVINCES ASSESSED

SCORE).248



Wildfire

RANK: 22 / 34 PROVINCES ASSESSED

SCORE: 0.197



**Extreme Weather** 

RANK: 12 / 34 PROVINCES ASSESSED

SCORE: 0.280



116

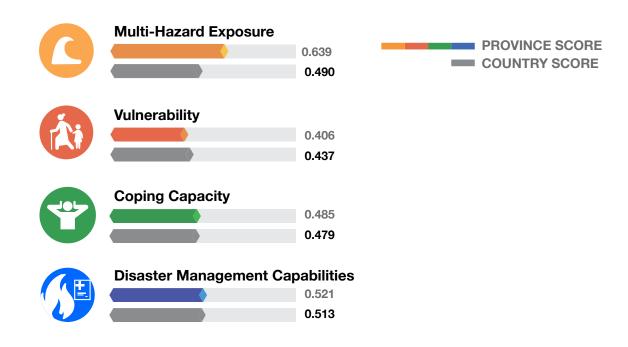
# **MULTI-HAZARD RISK (MHR)**

13 / 34



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

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



PDC Global www.pdc.org

# **JAWA TENGAH RECOMMENDATIONS**

1

#### **Environmental Stress**

Findings show that Jawa Tengah ranks 5th for Environmental Stress. Livestock Density in the province is 261.09 per square km. The province is also prone to flooding, extreme weather and drought. Promote education and training opportunities for farmers and agricultural workers focused on conservation and protection of soil and water resources.

2

#### **Information Access Vulnerability**

Jawa Tengah ranks 9th for overall Information Access Vulnerability. The Average Years of Schooling in the province is just 7.53 years. Implement outreach and education programs at village levels focused on promoting hazard awareness and preparedness and reducing health risks through sanitation and good hygiene.

# **JAWA TENGAH RECOMMENDATIONS**



#### **Economic Capacity**

Jawa Tengah has the 9th lowest Economic Capacity in the country, with the 3rd lowest Average Monthly Income (2.1 million IDR).

Increase access to financing and support structures (e.g. microfinance services and loans) for poor and vulnerable populations.



#### **Health Care Capacity**

Findings show constraints for the number of Nurses and Midwives (12.89 per 10,000 persons), number of Physicians (2.93 per 10,000 persons) and the number of Hospitals Beds (11.5 per 10,000 persons).

In coordination with Indonesia's Ministry of Health, continue health care accreditation efforts to increase access and service delivery of quality health care, especially to rural areas. Provide incentives for medical personnel to work in underserved areas.

118 PDC Global www.pdc.org

# **JAWA TENGAH RECOMMENDATIONS**

# 5

#### **Early Warning and Monitoring**

Findings show that Jawa Tengah has the 2nd lowest ranking for Early Warning and Monitoring. Flooding, earthquakes, drought and extreme weather are prevalent hazards. Enhance partnerships among stakeholders (e.g., institutions responsible for hazard detection and monitoring, and media outlets) to ensure that warning information has the greatest possible reach. Implement hazard awareness and preparedness campaigns to increase community resilience to hazard impacts.

# 6

#### **Emergency Services**

Findings show that Jawa Tengah has the 2nd highest ranking for overall Emergency Services relative to other provinces in the country. Capabilities could be further enhanced by strengthening participation, training and exercises of Search and Rescue Teams.



Better solutions. Fewer disasters.

# Safer World.

1305 N Holopono Street Suite 2, Kihei, HI 96753 P: (808) 891-0525 F: (808) 891-0526



@PDC\_Global







ndpba@pdc.org