



INDONESIA

JAWA TIMUR

NDPBA PROVINCE PROFILE

JAWA TIMUR

CAPITAL: SURABAYA

Area: 47,803 km²



Jawa Timur (East Java) is a Province rich in ethnic diversity and its principal city, Surabaya, is the second largest in Indonesia.

Given the province's sizable and diverse population and high levels of exposure to earthquakes, flooding and other hazards, DRR initiatives focused on increasing information access and promoting hazard awareness through community and school-based programs will be effective ways to reinforce disaster preparedness. In addition, efforts to reduce environmental stress and bolster health care capacity in the age of COVID19 will help strengthen the resilience of this populous region.

RISK AND VULNERABILITY COMPONENT SCORE



MULTI-HAZARD RISK (MHR) - High

Score: 0.512 • Rank: 12/34



RESILIENCE (R) - Moderate

Score: 0.531 • Rank: 14/34



MULTI-HAZARD EXPOSURE (MHE) - High

Score: 0.642 • Rank: 7/34



VULNERABILITY (V) - Low

Score: 0.409 • Rank: 22/34



COPING CAPACITY (CC) - High

Score: 0.519 • Rank: 12/34



DISASTER MANAGEMENT CAPABILITIES (DMC) - Low

Score: 0.483 • Rank: 25/34



Population (2020 Projected)

39,886,300



Population in Poverty

10.2%



Adult Literacy Rate

92.3%



Access to improved water

94.4%



Average life expectancy

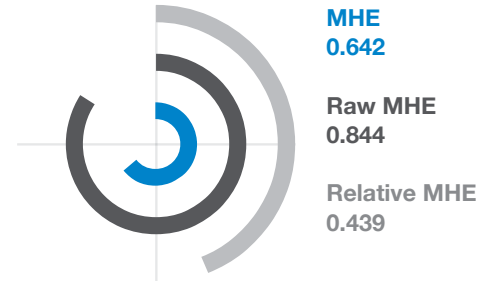
71.2 years

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



MULTI-HAZARD EXPOSURE (MHE)

RANK: 7 / 34 PROVINCES
SCORE: 0.642



ESTIMATED POPULATION AND CAPITAL EXPOSED TO EACH HAZARD:



Earthquake

38%

14,783,898
\$67.5 Billion



Tsunami

<1%

181,992
\$804.1 Million



Flood

52%

20,324,917
\$96.01 Billion



Flash Flood

3%

1,353,259
\$6.4 Billion



Landslide

2%

793,851
\$3.1 Billion



Volcano

2%

772,642
\$3.3 Billion



Drought

34%

13,206,537
\$58.1 Billion



Wildfire

8%

2,990,535
\$11.5 Billion



Extreme Weather

90%

35,441,148
\$161.9 Billion



VULNERABILITY (V)

RANK: 22 / 34 PROVINCES ASSESSED
SCORE: 0.409

Vulnerability in Jawa Timur 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: 0.592 RANK: 3/34 PROVINCES ASSESSED

19.6% Land susceptible to severe erosion	211.71 Livestock Density (per sq km)	3298.6 Net Deforestation (hectares per year)
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Vulnerable Health Status

SCORE: 0.371 RANK: 23/34 PROVINCES ASSESSED

71.18 Life expectancy (years)	30 Infant mortality rate (per 1,000 live births)	136.61 Maternal mortality ratio	9.2% Children (under 5) Wasting	9.4% Disability	4.7% Unmet health care needs	4.3% Households with limited access to health facility
2.3% Households with catastrophic health expenditure	21.39 Dengue incidence per 100,000 population	1.02 Measles incidence per 100,000 population	0.01 Malaria incidence per 100,000 population	187 TB case notification per 100,000 population	50.2 HIV & AIDS incidence per 100,000 population	0.9 Prevalence of Leprosy per 10,000 population



Clean Water Vulnerability

SCORE: 0.323 RANK: 24/34 PROVINCES ASSESSED

94.4% Households with improved water	78.8% Households with improved sanitation
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Information Access Vulnerability

SCORE: 0.579 RANK: 8/34 PROVINCES ASSESSED

92.3% Adult literacy rate	98.0% Net primary school enrollment rate	7.59 Average years of schooling	73.2% Household using internet
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Economic Constraints

SCORE: 0.350 RANK: 26/34 PROVINCES ASSESSED

3.9% Unemployment rate	43.9 Age dependency ratio	10.2% Poverty rate	0.37 GINI ratio
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Gender Inequality

SCORE: 0.498 RANK: 16/34 PROVINCES ASSESSED

0.94 Female to male literacy rate	0.69 Female to male labor ratio	1.03 Female to male secondary school enrollment ratio	15.0% Percent female seats in government
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Population Pressures

SCORE: 0.152 RANK: 34/34 PROVINCES ASSESSED

0.6% Average annual total population change	2.2% Average annual urban population change
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COPING CAPACITY (CC)

RANK: 12 / 34 PROVINCES ASSESSED
SCORE: 0.519

Jawa Timur 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: 0.392 RANK: 15/34 PROVINCES ASSESSED

69.5% **2,479,910** **39.9**
Labor force participation Average monthly income (IDR) GDP per capita (Million IDR)



Governance

SCORE: 0.608 RANK: 16/34 PROVINCES ASSESSED

67 **58.7%** **82.5%**
Crime rate per 100,000 population Crime clearance rate Voter participation



Environmental Capacity

SCORE: 0.189 RANK: 27/34 PROVINCES ASSESSED

5.0%
Protected area



Infrastructure Capacity

SCORE: 0.668 RANK: 7/34 PROVINCES ASSESSED



Health Care Capacity SCORE: 0.498 RANK: 14/34 PROVINCES ASSESSED

10.7 **3.62** **11.62** **12.1%** **57.2%** **91.5%** **63.0%**
Hospital beds per 10,000 people Physicians per 10,000 people Nurses and midwives per 10,000 people Time to public hospital (over 1 hour) Immunization rate (children under 5) Health care accreditation rate Population covered by health insurance



Transportation Capacity SCORE: 0.643 RANK: 7/34 PROVINCES ASSESSED

1.10 **29.56**
Road and rail density Average distance to port or airport



Communications Capacity SCORE: 0.645 RANK: 14/34 PROVINCES ASSESSED

62.2% **1.6%**
Mobile phone ownership Households with Fixed Phones



Energy Capacity SCORE: 0.885 RANK: 2/34 PROVINCES ASSESSED

99.4% **20.0%** **140.36** **80.5%**
Households served by state electricity Percentage of total national electricity generated in province Electricity generation GWh per 100,000 Population Households with gas for cooking



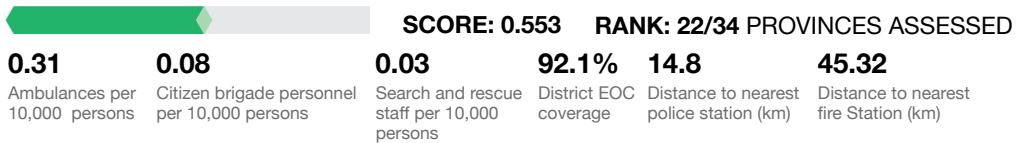
DISASTER MANAGEMENT CAPABILITIES (DMC)

RANK: 25 / 34 PROVINCES ASSESSED
SCORE: 0.519

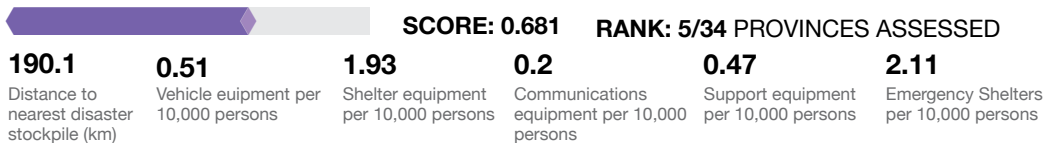
Jawa Timur exhibits weaker Disaster Management Capabilities in the areas of Early Warning and Monitoring and Emergency Services. The bar charts indicate the disaster management themes contributing to the province's overall Disaster Management Capabilities score.



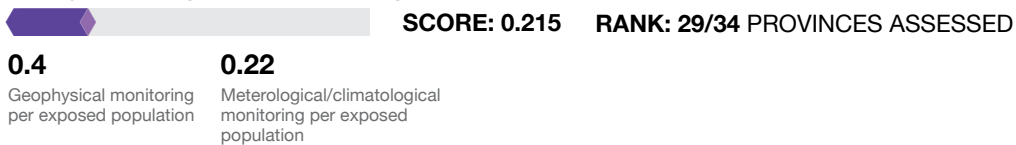
Emergency Services



Mass Care Support



Early Warning and Monitoring





RESILIENCE (R)

RANK: 14 / 34 PROVINCES ASSESSED
SCORE: 0.531

Jawa Timur's Moderate Resilience score and ranking are due to Low Vulnerability combined with High Coping Capacity, and Low 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: 19 / 34 PROVINCES ASSESSED
SCORE: 0.237



Tsunami

RANK: 19 / 34 PROVINCES ASSESSED
SCORE: 0.186



Flood

RANK: 4 / 34 PROVINCES ASSESSED
SCORE: 0.301



Flash Flood

RANK: 9 / 34 PROVINCES ASSESSED
SCORE: 0.248



Landslide

RANK: 14 / 34 PROVINCES ASSESSED
SCORE: 0.220



Volcano

RANK: 7 / 34 PROVINCES ASSESSED
SCORE: 0.264



Drought

RANK: 10 / 34 PROVINCES ASSESSED
SCORE: 0.247



Wildfire

RANK: 10 / 34 PROVINCES ASSESSED
SCORE: 0.257



Extreme Weather

RANK: 11 / 34 PROVINCES ASSESSED
SCORE: 0.288



MULTI-HAZARD RISK (MHR)

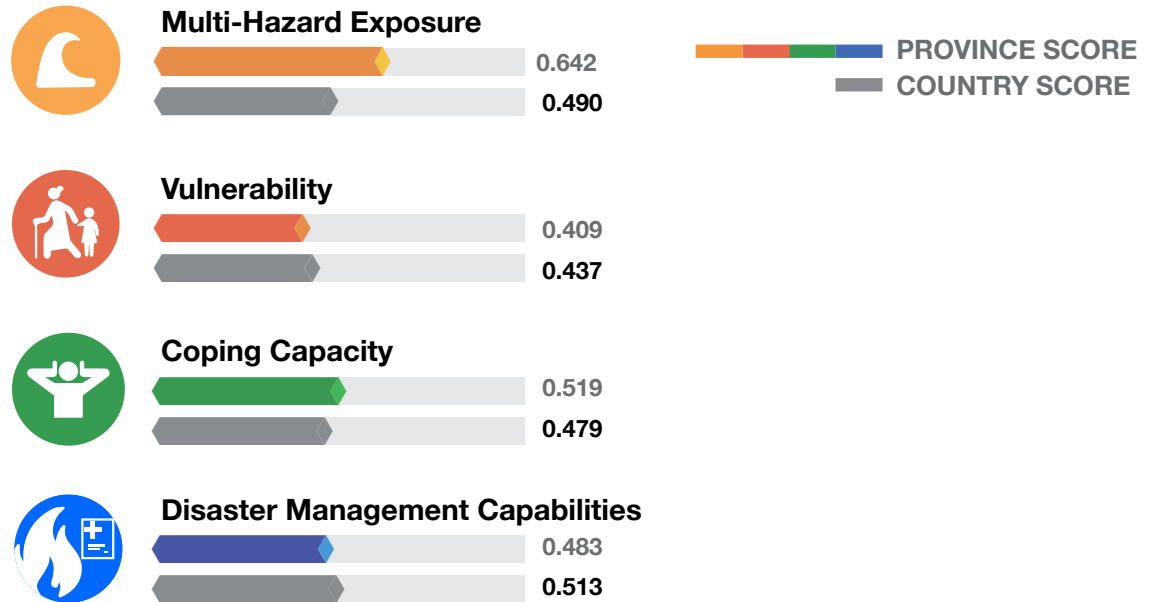
12 / 34

RANK WITHIN PROVINCES
Score: 0.512



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

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



JAWA TIMUR RECOMMENDATIONS

1

Environmental Stress

Findings show that Jawa Timur has the 3rd highest Environmental Stress in Indonesia due to a high Livestock Density (211.71 animals per square km) and 19.56% of the province prone to Severe Erosion Rates of over 180 tons per hectare per year. Jawa Timur also experiences a high rate of flooding.

Strengthen environmental policies to reduce environmental degradation as a result of unsustainable agricultural practices.

Support farmers through education, training and extension services to share best practices in soil and water conservation and animal husbandry. Invest in infrastructure and supplies to support implementation of best practices (e.g., modern irrigation equipment, fencing, etc.)

2

Information Access Vulnerability

Jawa Timur has the 8th highest ranking for Information Access Vulnerability, with the 3rd lowest Adult Literacy Rate (92.32%) and only 7.59 years of schooling on average.

Improving literacy and education levels will help to increase economic opportunities in the province. Continue partnership engagements with the Ministry of Education and I/NGOs to implement programs focused on overcoming challenges in education service delivery and improving learning outcomes among students.

Build community resilience through the implementation of community outreach and education programs focused on hazard awareness, disaster preparedness and health and safety practices.

JAWA TIMUR RECOMMENDATIONS

3

Economic Capacity

Jawa Timur ranks 15th for overall Economic Capacity, influenced by the 13th lowest score for Average Monthly Income (2.4 million IDR).

Implement programs geared toward building the entrepreneurial and technical skills of small business owners and household enterprises.

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

4

Health Care Capacity

Health Care Capacity in Jawa Timur is constrained by the number of Nurses and Midwives (11.62 per 10,000 persons), the number of Hospital Beds (10.7 per 10,000 persons) and the percentage of the population without Health Insurance (37%).

Continue efforts to improve access to and affordability of health care through infrastructure enhancement and programs with special focus on mothers, children, adolescents, elderly, and those with chronic health conditions.

JAWA TIMUR RECOMMENDATIONS

5

Early Warning and Monitoring

Findings show that Jawa Timur has the 6th lowest ranking for Early Warning and Monitoring. Work closely with issuing agencies and media outlets (including radio stations) to strengthen receipt and broad dissemination of hazard alert and warning information.

6

Emergency Services

Jawa Timur ranks 22nd for overall Emergency Services capabilities. Focus areas for enhancement on increasing the Number of Ambulances (currently 0.31 per 10,000 persons) and trained emergency medical technicians in the province.

Increase participation, training and exercising of Search and Rescue teams and Citizen Brigades.

**Better solutions.
Fewer disasters.**

Safer world.

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