

# SHAKING THE ARCHIPELAGO

## 25 years of Seismic Activities in the Philippines

The Philippines is **one of the most disaster-prone countries in the world**. Situated along the Pacific Ring of Fire, it experiences frequent seismic activity due to active tectonic movements, particularly along the Philippine Trench and other fault systems. **According to the 2024 World Risk Report by UNICEF, the Philippines ranks first** among countries with the highest disaster risk.

This map visualizes **25 years of earthquake occurrences (2000–2024)**, highlighting seismic hotspots and the country's vulnerability to tectonic hazards. The total recorded earthquakes, as well as earthquake-related deaths, injuries, affected populations, and economic damages (in USD) sourced from USGS EHP and EM-DAT.

### Active Fault

- Approximate Offshore Projection
- Active Fault (Approximate)
- Active Fault (Certain)

### Potential Active Fault

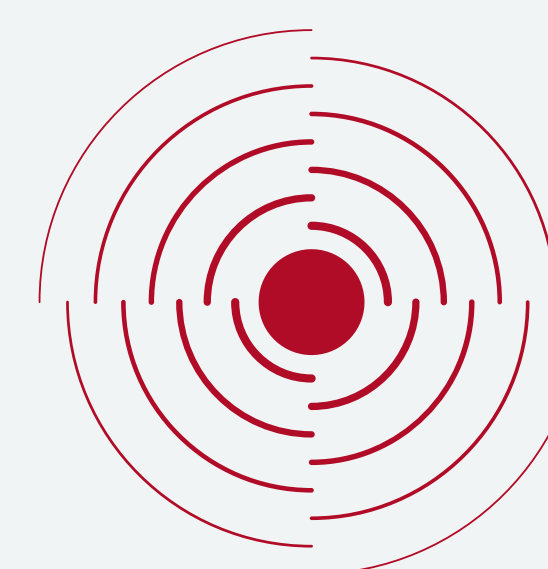
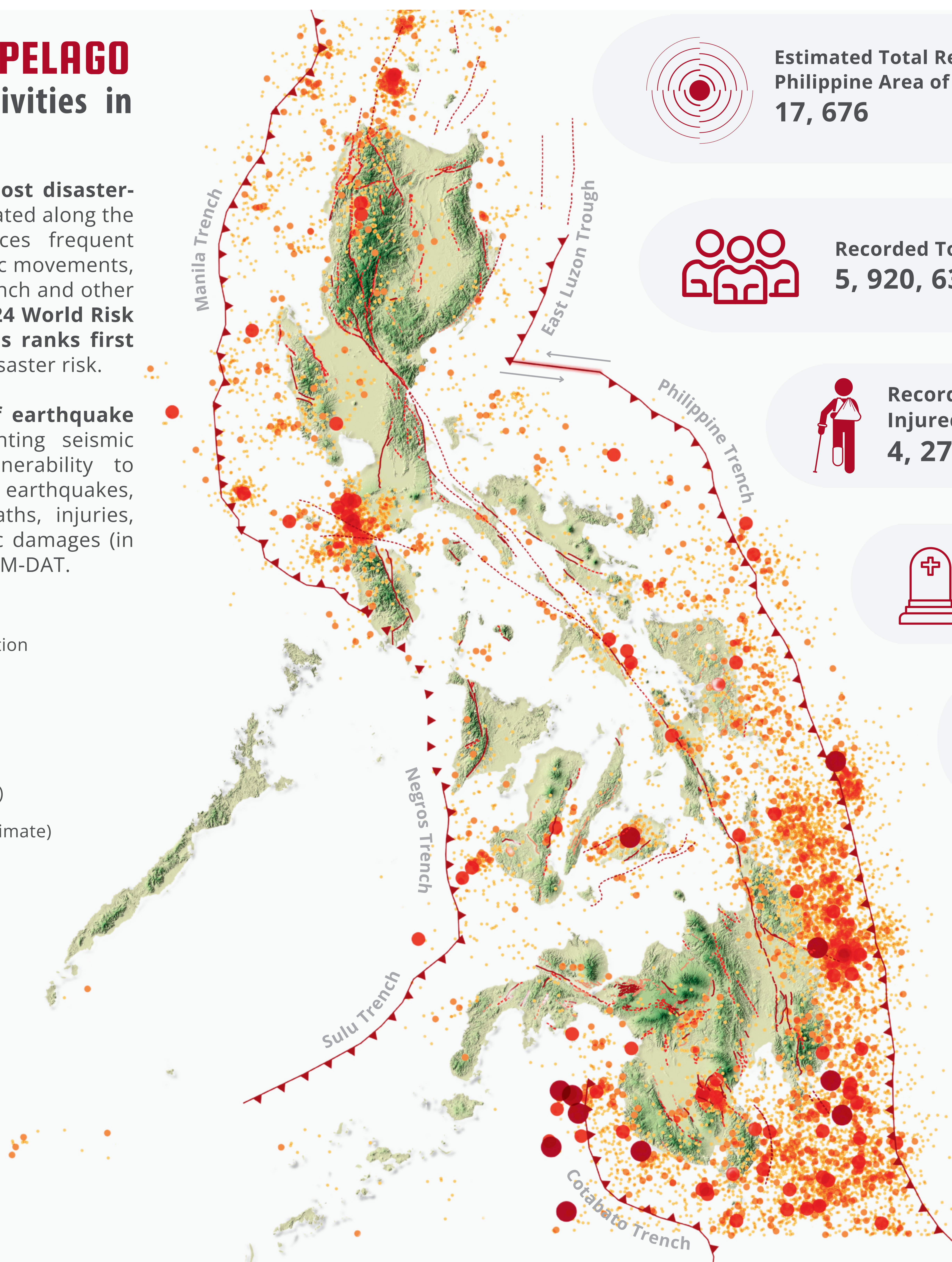
- Potential Active Fault (Certain)
- Potential Active Fault (Approximate)

### Convergence Zone

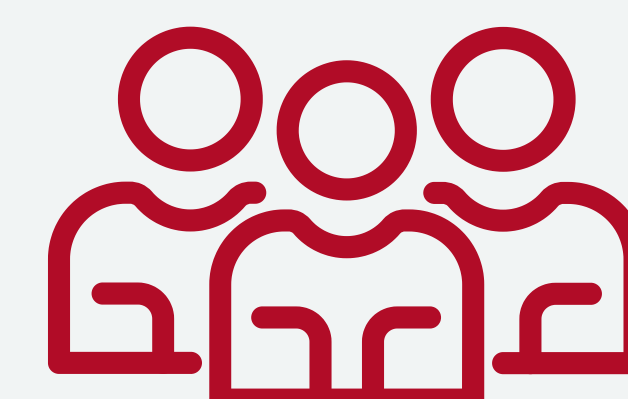
- Trench
- Collision Zone
- Transform Fault

### Earthquake Magnitude

- < 4.0
- 4.0 - 5.0
- 5.1 - 6.0
- 6.1 - 7.0
- > 7.0



Estimated Total Recorded Earthquakes within Philippine Area of Responsibility (PAR)  
**17, 676**



Recorded Total No. of People Affected  
**5, 920, 638**



Recorded Total No. of People Injured  
**4, 270**



Recorded Total No. of Deaths  
**491**



Estimated Total Damages  
**387, 317**

### Data Sources:

OpenTopography. (2024). Digital Elevation Model (DEM) via OpenTopography Plugin in QGIS. Retrieved from <https://opentopography.org>

Centre for Research on the Epidemiology of Disasters (CRED). (2024). EM-DAT: The International Disaster Database [Data file]. Université Catholique de Louvain. Retrieved from <https://www.emdat.be>

U.S. Geological Survey. (2000–2024). Earthquake Hazards Program data and reports. Earthquake Hazards Program.

GADM. (2022). GADM database of global administrative areas, version 4.1 [Shapefile]. Retrieved from <https://gadm.org>

Dome, A. (2025). Philippine Fault Lines and Trenches [Manual Digitized Geospatial dataset]. Geoportal Philippines. Retrieved from <https://geoportal.gov.ph>

Bernardo, T. I., Bajarias, T. G. (n.d.). Philippine Fault Lines and Trenches [Manual Digitized Geospatial dataset].

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