

Seismic Observation of the Philippines

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The current earthquake monitoring network in the Philippines (Fig.1) consists of 29 manned stations, 30 unmanned stations and 6 volcanological observatories. The manned stations are equipped with short period seismographs, the manned stations with short and broadband seismographs, the satellite stations with short period seismographs. An average of twenty earthquakes per day is being recorded by the Philippine Seismic Network. For the past years the Philippines experienced numerous damaging earthquakes and tsunami events.

The Seismological Observation and Earthquake Prediction Division (SOEPD) of Philippine Institute of Volcanology and Seismology (PHIVOLCS) is in charge of monitoring of earthquake and tsunami occurrences. The Data Receiving Center (DRC), the core of its earthquake monitoring, is manned with appropriate staff at all times (24 hours, 7days). The DRC is equipped with two automatic earthquake location computers, SeisComP and Hydra. These computers continuously receive process and evaluate seismic data in near-real time. The data used for the analysis comes from two different sources: the 29 unmanned seismic stations maintained by PHIVOLCS and a number of selected Global Seismic Network (GSN) Stations maintained by the Incorporated Research Institutions for Seismology (IRIS). The data from the unmanned stations of PHIVOLCS are transmitted continuously through satellite communication while the streaming data from the GSN stations are collected through high speed internet connection. With these, the DRC is capable of monitoring earthquake events worldwide. In addition, tide information from international tsunami buoys (DART) and tide gauge stations are also collected via internet connection in order to continuously monitor the sea level changes along the Pacific.

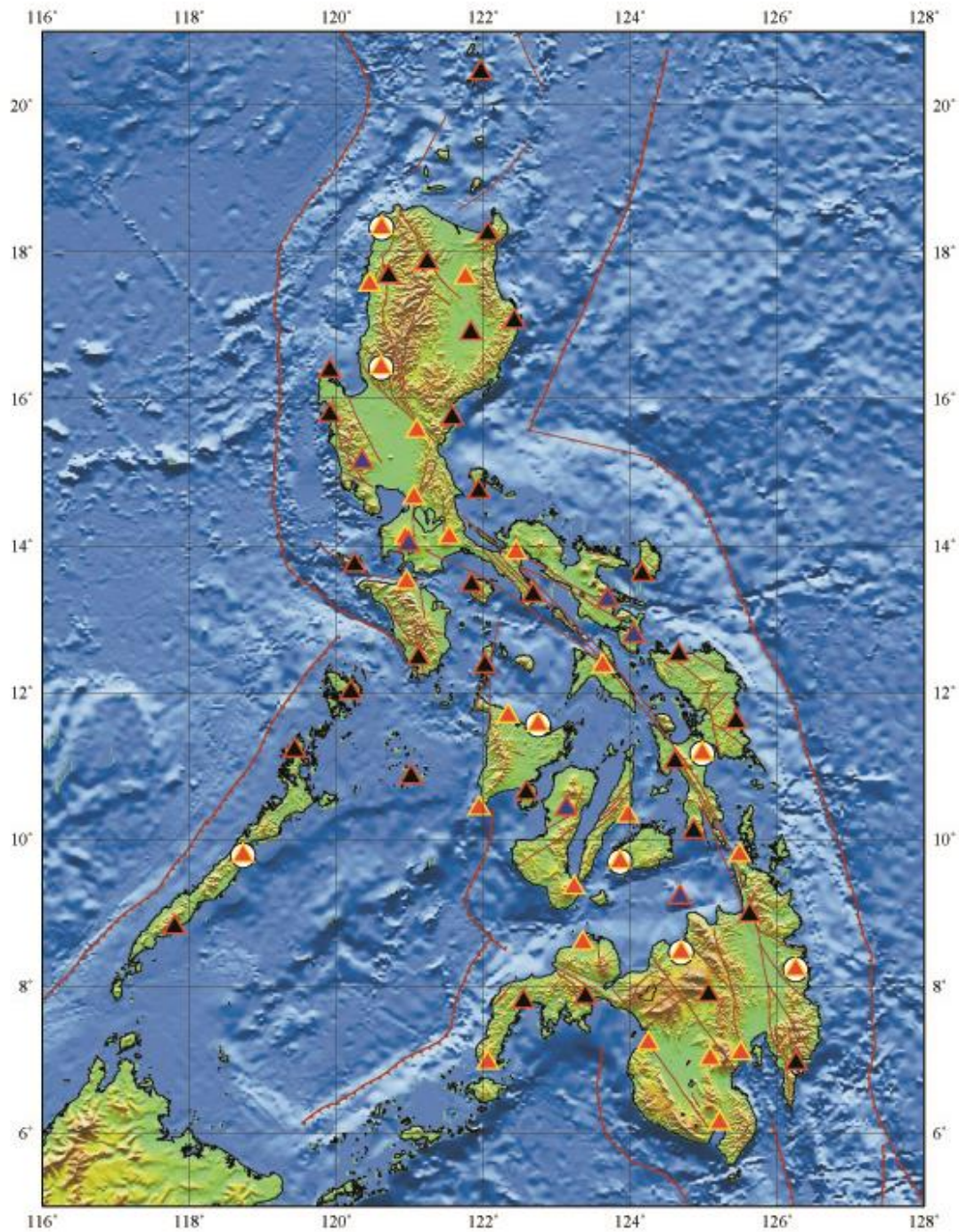


Figure 1. Earthquake Monitoring Network in the Philippines

The network consists of 29 manned stations, 30 unmanned stations and 6 volcanological observatories.

Orange triangles: Manned stations with short period seismographs

Orange triangles with white circles: Manned stations with short and broadband seismographs

Black triangles: Satellite stations with short period seismographs

Blue triangles: Volcanological observatories.