



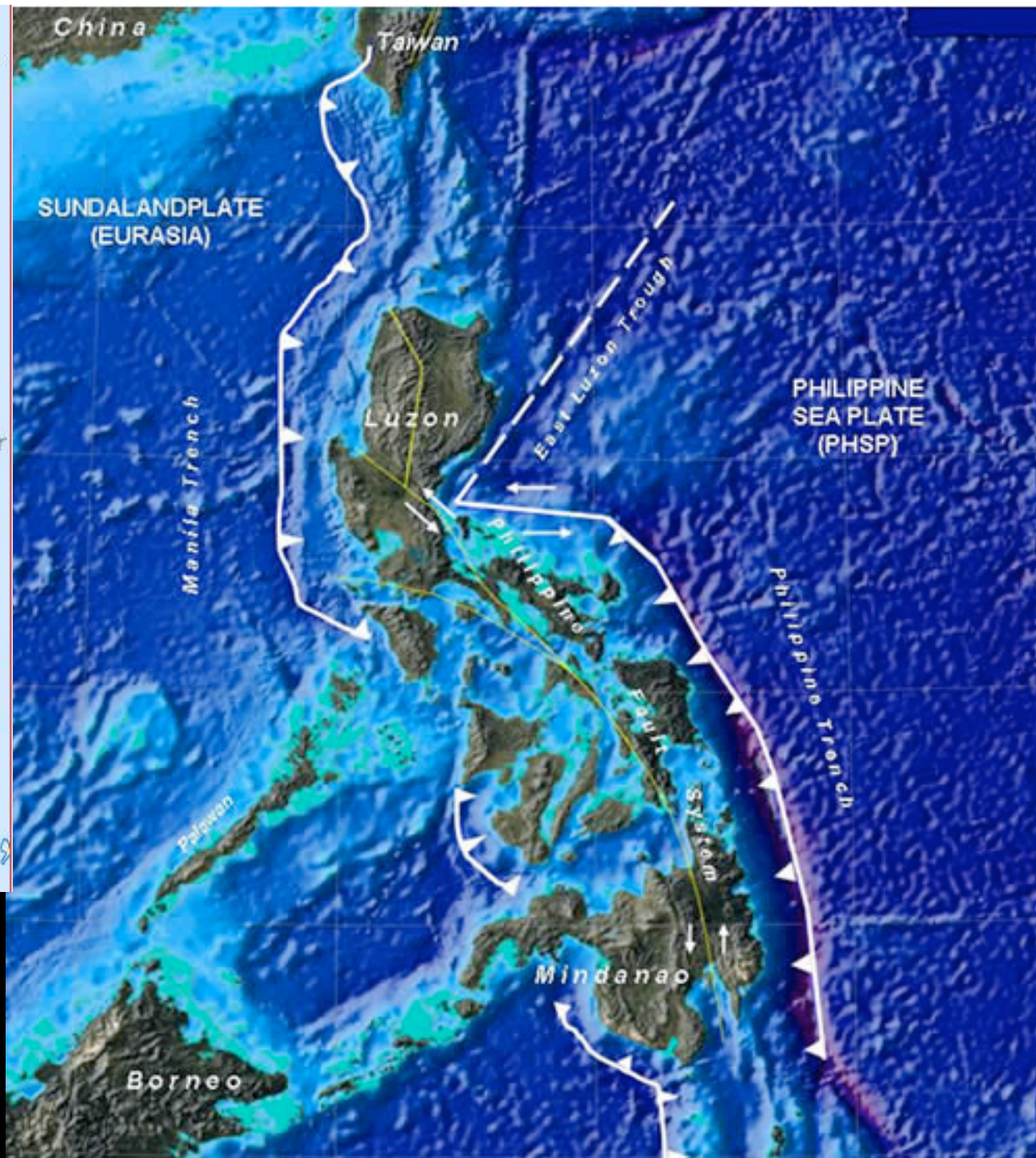
# Mt. Pinatubo

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# Luzon, Philippine Islands

- Stratovolcano
- Formed at a subduction zone where the Philippine Mobile Belt is sliding over the Eurasian plate along the Manila Trench
- Andesite, Dacite



Tectonic setting of the Philippine Islands.

# Events leading to eruption

- 7.7 magnitude earthquake
- Emission of steam and gases
- Small landslides
- A succession of earthquakes increasing in magnitude
- Phreatic eruptions
- Small eruptions continued along with many earthquakes
- Small magmatic eruptions

# June 7<sup>th</sup>, 1991

- The Philippine Institute of Volcanology and seismology issued an eruption warning after the first large explosion
  - 7m tall ash column
- Daily warnings and updates were delivered by newspaper, radio, television, and door to door



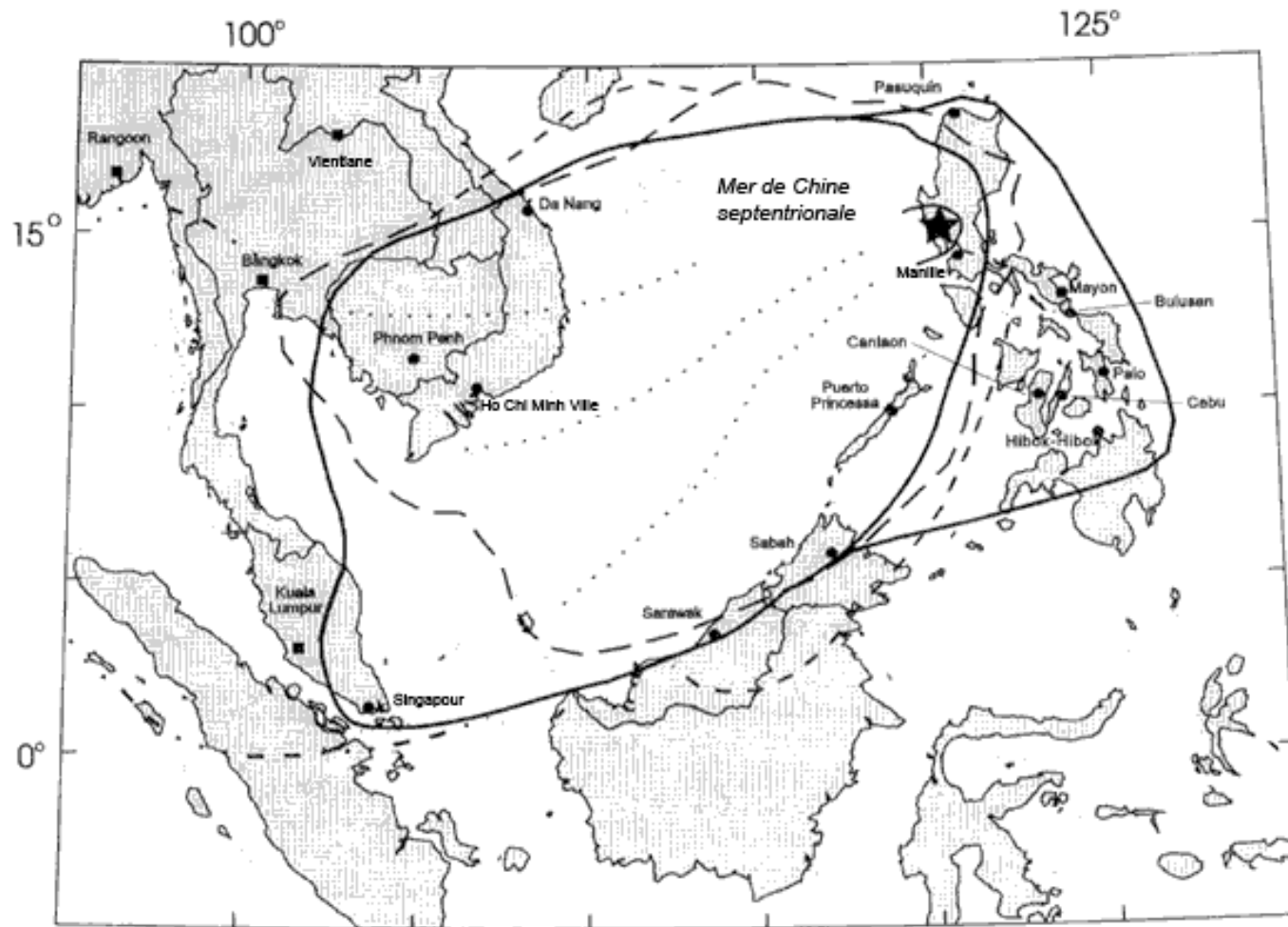


- Formation of a lava dome at the summit
- June 12<sup>th</sup>- eruptions became increasingly intense, with eruption columns, pyroclastic flows, and tephra
- Large tremors/earthquakes

- 1991 June 15<sup>th</sup> eruption-
  - Pyroclastic flows, ash deposits, and lahars
  - Ultraplinian column
  - 10 billion metric tons of magma
  - 100m thick pyroclastic flows
  - Typhoon rains creates massive lahars
  - Ash could covered all of central Luzon- bring total darkness



# Tephra fall from 1991 eruption



- 10 times larger than Mt. St. Helens 1980 eruption
- 800+ people killed



# Major Costs

- Displaced people/families
- Ash + Typhoon = Roof collapse
- further costs were incurred in constructing dikes and dams to control the post-eruption lahars
- volume of lava and ash injected significant quantities of aerosols and dust into the stratosphere

# Currently...

- Activity continued on a smaller scale through August
- By 1992 July, a new lava dome was forming