



Mount Kanlaon

Source: BS

Mount Kanlaon, a **2,435-meter** active **volcano** in the Philippines, recently erupted, releasing ash and gases.

- Mount Kanlaon is a **stratovolcano** in the **north central part of the island of Negros**.
- The **Philippines** and Mount Kanlan is located in the **Pacific Ring of Fire**, a region known for its high seismic activity, making it one of the most disaster-prone areas globally.

Volcano:

- A **volcano** (an **endogenic process**) is a weak spot in the earth's crust where gases, lava, ash, and steam are expelled during an eruption.

VOLCANOES

A volcano is a vent or a fissure in the crust from which lava (molten rock), ash, gases, rock fragments erupt from a magma chamber below the surface

Types: On basis of -

- **Periodicity of Eruption:**
 - Active volcano: Recently Erupted
 - Dormant Volcano: Potential for eruption, no imminent signs
 - Extinct: No recent eruptions, low possibility in future
- **Nature of Eruption:**
 - Hawaiian: Calmest types (low gaseous content)
 - Strombolian: Formation of large gas bubbles in magma
 - Vulcanian: More explosive
 - Plinian eruptions: Magma's volatile gases rise via a narrow conduit
 - Icelandic: Often build lava plateaus
- **Shape of Volcanoes:**
 - Shield volcanoes: Composed of basaltic lava, low slope
 - Cone volcanoes (Cinder Cones): Most abundant
 - Composite cones (stratovolcanoes): Formed by layers of diverse materials.

Volcanic Features:

- **Extrusive :**
 - Crater: Cone-shaped vent for magma
 - Caldera: Large, crater-like depression
 - Volcanic Plateaus: Levelled areas from fissure eruptions
- **Intrusive:**
 - Batholiths: Central core of a volcanic mountain.
 - Dyke: Vertical intrusion cutting across country rock bedding.
 - Sills: Tabular intrusions along sedimentary bedding.
 - Laccoliths: Magma injection along horizontal sedimentary bedding.
- **Minor:**
 - Geysers: Underground water above 100°C, powered by magma, results in powerful eruptions with steam and diluted minerals.
 - Hot Springs: Heated water flows quietly along fault zones.

Distribution of Volcanoes:

- Subduction zones (Circum Pacific Belt)
- Divergence zones (Mid Atlantic Ridge)
- Intra-plate oceanic volcanism (Hawaiian chain)
- Mid-continental belt and volcanoes in Mediterranean region

Volcanoes in India:

- No volcanoes in Himalayas
- Barren Island (Only active volcano)

Products of Volcanic Eruption:

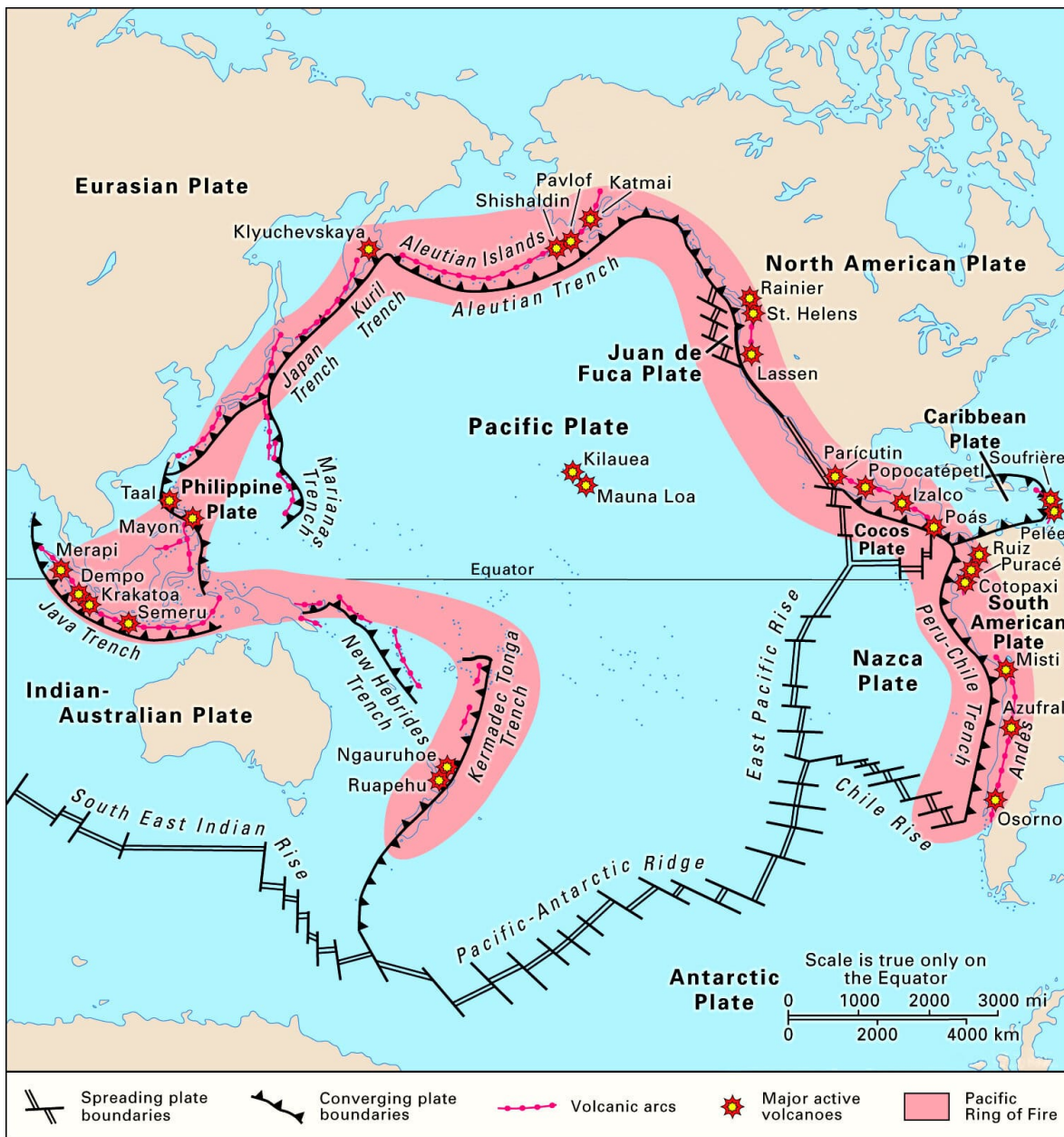
- **Gases:** H, C, O, S, N, CH₄, NH₃
- **Solid:** Pyroclastic materials
- **Liquid:** Lava

Diagram Labels: Volcanic Bombs, Crater, Main Vent, Secondary Vent, Lava Flow, Pipe, Magma Chamber

Logos: दृष्टि Drishti IAS, d

Pacific Ring of Fire:

- The **Ring of Fire**, or **Circum-Pacific Belt**, is a **seismic zone** around the **Pacific Ocean** known for **active volcanoes** and **frequent earthquakes**, caused by interactions between the **Pacific Plate** and surrounding less-dense plates.
- The **Ring of Fire** spans about **40,000 kilometers**, marking the boundaries of tectonic plates such as **Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates**.



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