



Semeru Volcano of Indonesia

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Why in News

Recently, **Semeru volcano** erupted in **Indonesia's East Java province**. Other volcanoes, such as the **Merapi volcano (Java)** and **Sinabung volcano (Sumatra)**, also erupted recently.

Key Points

- **Semeru Volcano:**
 - Semeru - also known as "The Great Mountain" - is the highest volcano in Java and one of the most active.
 - It previously erupted in December, 2019.
 - Indonesia, with the maximum number of active volcanoes in the world, is **prone to seismic upheaval** due to its location on the **Pacific's Ring of Fire**.
 - Semeru volcano is also the part of the **Island arcs** formed by the subduction of the **Indo-Australian plate** below **Sunda Plate** (part of Eurasian Plate). The trench formed here is called Sunda trench whose major section is the Java Trench.
- **Pacific Ring of Fire:**
 - **The Ring of Fire**, also referred to as the **Circum-Pacific Belt**, is a path along the Pacific Ocean characterized by **active volcanoes and frequent earthquakes**.
 - It traces boundaries between several tectonic plates—including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.



Island Arcs:

- They are long, curved chains of **oceanic islands** associated with **intense volcanic and seismic activity and orogenic** (mountain-building) processes.
 - An island arc typically has a **land mass or a partially enclosed, unusually shallow sea** on its concave side.
 - Along the convex side there almost invariably exists a long, **narrow deep-sea trench**.
 - The greatest ocean depths are found in these depressions of the seafloor, as in the case of the **Mariana (deepest trench in the world) and Tonga trenches**.
- Prime examples of this form of geologic feature include the **Aleutian-Alaska Arc** and the **Kuril-Kamchatka Arc**.

Source: IE