



### 1 Antarctic Treaty

#### Need To Know

- The Antarctic Treaty establishes Antarctica as a zone dedicated to peace and scientific research and promoting international cooperation.
- It treats Antarctica as part of the global commons.
- It prohibits military activity, nuclear testing, and the disposal of nuclear waste in the region.
- India is a signatory of the treaty.

#### Relevance of Antarctic Treaty

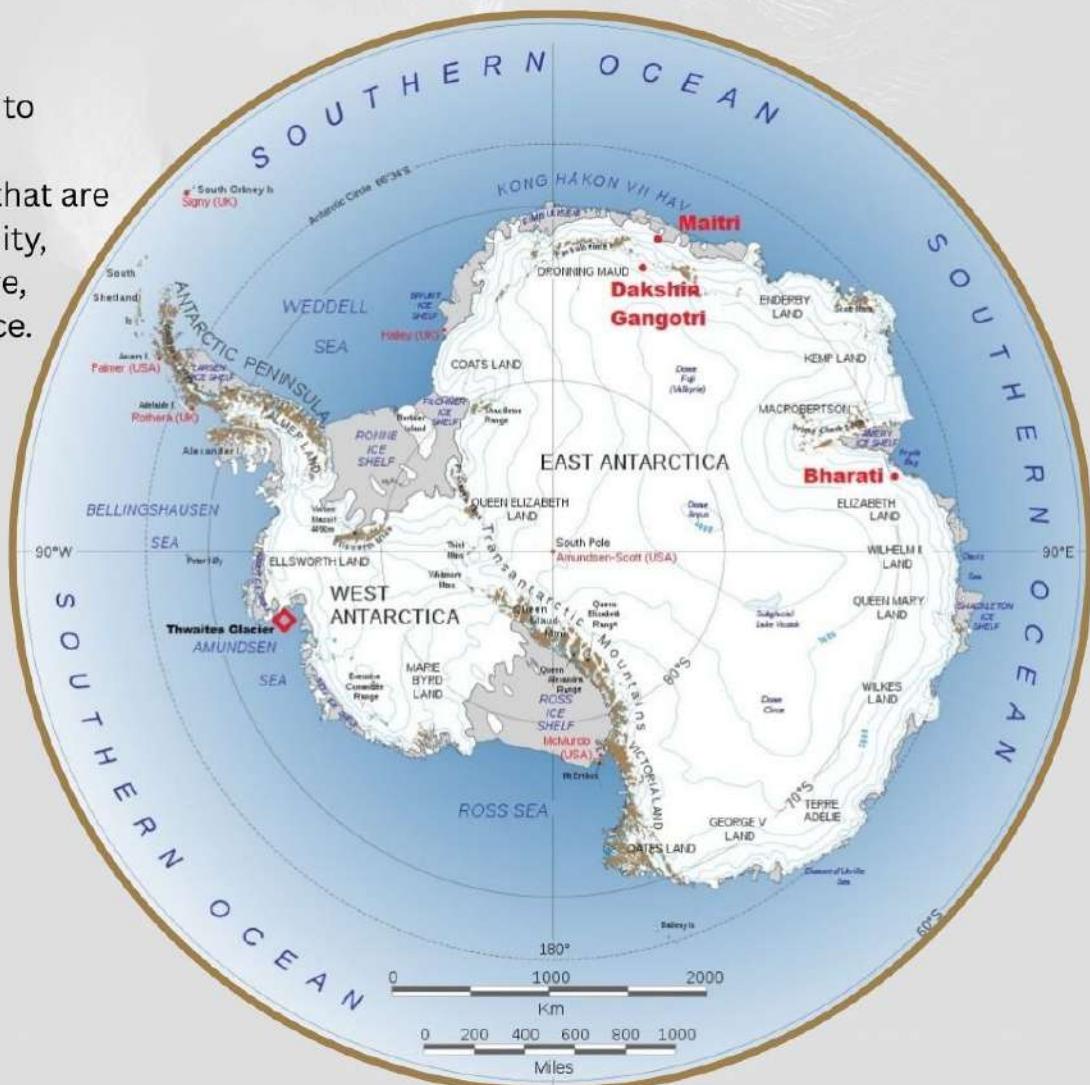
- Ecological Importance: Ensures preservation of Antarctica's environment
- Scientific Value: Ice core studies provide vital insights into historical climate trends
- International Cooperation : Serves as a model of governance over global commons
- India's Polar Engagement: India maintains strategic presence through stations Maitri and Bharati.

#### Global Commons

- Global commons refer to natural resources and environmental assets that are shared by all of humanity, such as the atmosphere, oceans, and outer space.

These areas are not owned by any one nation, making them vulnerable to exploitation and degradation.

Antarctica is one such entity identified as Global Common.





### 2 Impact of Increase in Gold Price

- **Higher Import Burden:** Rising prices increase the import bill for India.
- **Widening Trade Deficit & CAD:** Costlier gold imports raise foreign exchange outflow, worsening the current account deficit.
- **Rupee Depreciation:** Higher dollar demand for imports weakens the rupee.
- **Inflationary Pressure:** A weaker rupee makes other imports (oil, fertilizers) expensive, adding to inflation.
- **Shift in Household Savings:** Gold is seen as a safe asset, so savings move away from productive investments.
- **Lower Economic Growth:** Reduced financial savings limits capital for investment and development.
- **Rise in Smuggling:** High prices and import duties encourage illegal gold trade.
- **Safe-Haven Demand Factor:** Global uncertainty increases gold demand, further pushing prices up.

**Do you think this price rise will impact India's Current Account Deficit (CAD)? How exactly does it affect the CAD? Let's examine this tomorrow.**





### 3 Polar Vortex

#### What is it?

- **Polar vortex**, is a large area of persistent low pressure generally located above each of Earth's polar regions and containing a mass of extremely cold air.

#### Characteristics of Polar Vortex :

- Direction of vortex is **Anti-Clockwise**.
- Usually exists in the area **between Troposphere and Stratosphere**.
- The polar vortex helps keep the jet stream stable, preventing cold air from moving south.
- It is strongest in winter and helps the polar region remain cold by keeping the arctic air confined near the poles.
- When the temperature difference between polar and mid-latitude (temperate) regions is very high, the jet stream becomes extremely strong and flows in a relatively straight path with minimal waviness.
- However, when this temperature contrast weakens, the jet stream loses strength and begins to meander, forming large atmospheric waves known as Rossby waves.
- **This leads to :**
  - Severe winter storms in the US, Canada, Europe.
  - Unusual cold waves in mid-latitudes.

