Pamir-Karakoram Mountains

Prelims: *Current events of national and international importance | Geography*

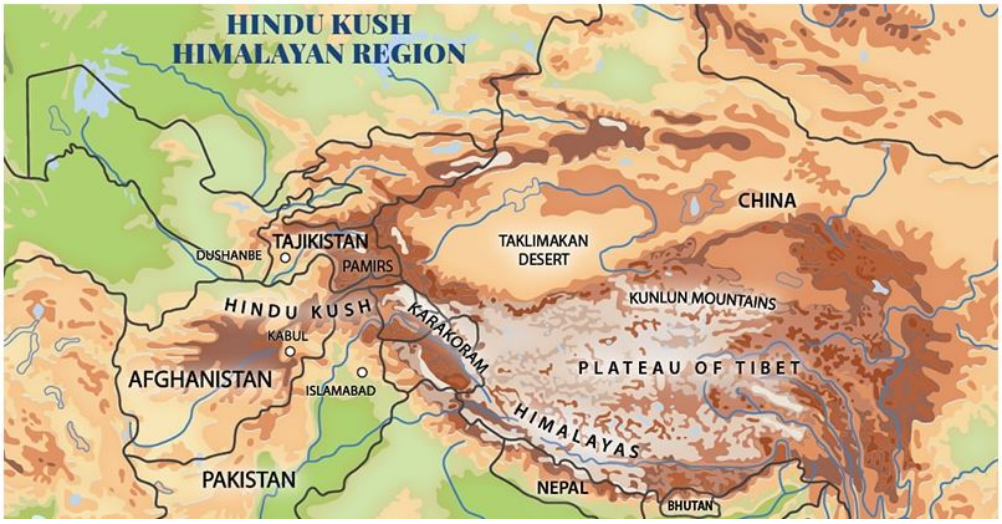
Why in news?

Scientists are studying ice cores from the Pamir Mountains to understand the Pamir–Karakoram anomaly—a rare phenomenon. These ice cores may hold clues to protecting glaciers globally.

- **Location –** It spans the Karakoram range (Pakistan, India, China) and the Pamir mountains (Tajikistan, Afghanistan, China).
- The Pamir Mountains are known as **'*The Roof of the World*'** & Karakoram is often called the "***Backbone of High Asia***".
- **Pamir-Karakoram Anomaly –** A rare climatic phenomenon where glaciers in the Pamir and Karakoram mountains ***resisted melting and even slightly grew***, unlike the global trend of retreat.
- The Pamir–Karakoram region is the ***only mountainous area*** on Earth where this phenomenon exists.

Location of Expedition – *Ice cores were drilled from the* ***Kon-Chukurbashi ice cap*** *in the Pamir Mountains, Tajikistan, at an altitude of 5,810 m.*

- **Duration –** It is observed from the late 20th century until around 2018, when signs of decline began.
- **Causes –** Linked to unique regional climate patterns, including increased winter precipitation, cooler summers, and circulation anomalies that favoured glacier stability.
- **UNESCO's List -** The Karakorum-Pamir region is part of ***UNESCO's Tentative List*** submitted by China.
- **Habitats –** High-altitude desert and steppe ecosystems.



Other Features

- **Pamir Knot –** It serves as a junction for ***5 major mountain systems*** -
  - Himalayas - Extend to the southeast.
  - Karakoram - Radiate southeastward, between the Himalayas and the Kunlun.
  - Hindu Kush - Extends to the west and southwest.
  - Tian Shan - Radiates to the north and northeast.
  - Kunlun - Extend to the east.
- **Highest Peaks –** Includes K2 (8,611 m), Ismoil Somoni Peak (7,495m), Kongur Tagh (7,719 m), Mt. Muztag Ata (7,546 m), and Jiubie Mountains (7,530 m).
- **Unique Landforms –** Mud volcanoes in Muji Valley, alpine lakes (Kalakule, White Sandy).
- **Glaciers –** Fedchenko Glacier, which is in the Pamir mountain (the longest outside polar regions) & Siachen and Baltoro glaciers in the Karakoram.
- **Other glaciers include** the Karakorums, Pamirs, Yinsugaiti (the longest in China), etc.

References

1. The Hindu | Scientific expedition on the ice cores
2. UNESCO | Karakorum-Pamir

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