

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](#)