What are Rock glaciers?

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About Rock glaciers

- A rock glacier is a mass of rock, ice, snow, mud, and water that moves slowly down a mountain under the influence of gravity.
- Unlike an ice glacier, rock glaciers usually have very little ice visible at the surface.
- The rock glacier might consist of a mass of ice covered by rock debris, or it might consist of a mass of rock with interstitial ice.
- Formation:
    - Rock glaciers typically form in mountainous regions where there is a combination of permafrost, rock debris, and ice.
    - One common scenario involves a pre-existing glacier that accumulates debris and rocks as it moves.
    - Over time, if the glacier recedes or thaws, the debris-covered ice can transform into a rock glacier.
- These are classified as ‘active’ or ‘relict’ to indicate the status of permafrost within them, identified by the appearance of the rock surfaces.

- Impacts
    - It increases the risk of glacial lake outburst floods (GLOFs).
    - It may also make landslides more frequent with the land on the melting ice becoming loose.

Q1) What is Permafrost ?

It is a permanently frozen layer on or under Earth’s surface. It consists of soil, gravel, and sand, usually bound together by ice. Permafrost usually remains at or below 0°C (32ºF) for at least two years. Permafrost can be found on land and below the ocean floor.

Source: Over 100 active permafrost structures identified in Jhelum basin, can cause catastrophic disasters in future: Study