

UPSC Civil Services Examination

UPSC Notes [GS-I]

Topic: Glacial Depositional Landforms (Geography Notes for UPSC)

Various Glacial Depositional Landforms

Glaciers have played an important role in the moulding of landscapes in the mid and high latitudes of alpine environments. The major depositional landforms made by glaciers are:

- Esker
- Outwash plains
- Drumlins

Eskers

- The esker is one of the most striking landforms of fluvioglacial deposition.
- They are usually formed of washed sand and gravel.
- Eskers vary in shape and size.
- When glaciers melt, the water flows on the surface of the ice or leaks down along the margins.
- These waters amass underneath the glacier and flow like streams in a channel beneath the ice. Such streams flow over the ground with ice forming its banks.
- Very coarse materials like stones and blocks along with some minor segments of rock debris transported into this stream settle down in the valley of ice underneath the glacier and after the ice melts can be found as a winding ridge called Esker.

Outwash Plains

- It is also known as called a sandur.
- It is a plain formed of glacial sediments deposited by meltwater outwash at the limit of a glacier.

Drumlins

- These are smooth oval shaped ridge-like topographies composed primarily of glacial till with masses of gravel and sand.
- It forms due to the dumping of rock debris underneath heavily loaded ice through fissures in the glacier.
- The long axes of drumlins are parallel to the direction of ice movement.
- Drumlins give an indication of the direction of glacier movement.
- The Stoss end is the steeper of the two ends and used to face into the ice flow.