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## Growing Glacier in Uttarakhand's Niti Valley | Uttarakhand | 07 Dec 2024

### Why in News?

Recently, in a remarkable discovery, scientists have identified a rapidly expanding [glacier](#) in Uttarakhand's [Niti Valley](#).

- The study, titled "**Manifestations of a Glacier Surge in Central Himalaya Using Multi-Temporal Satellite Data**," utilized **satellite imagery** to observe the glacier's rapid growth.

### Key Points

- This new glacier, which stretches about **10 kilometers** in length and spans approximately **48 square kilometers**, is located near the **Randolph** and **Rekana glaciers** in the remote northern region of the state, close to the [India-Tibet border](#).
- The glacier is currently experiencing a "surge" i.e., **a sudden and rapid increase in the size of a glacier, which can be caused by hydrological imbalances**.
  - These imbalances occur when water infiltrates the ice layers, weakening them and causing the ice to slide downward.
- The discovery of this fast-growing glacier has **significant implications for the region's environment and climate**.
  - Glacial surges can lead to **increased risks of [Glacial Lake Outburst Floods \(GLOFs\)](#)**, which pose a threat to downstream communities and infrastructure.
    - Understanding the dynamics of such glaciers is crucial for developing effective mitigation strategies.
  - As [global temperatures rise](#), the behavior of glaciers in this region is becoming increasingly unpredictable, necessitating ongoing monitoring and study.