Ice thickness measurement of the debris-covered Hungsoma glacier, Nepal Himalaya

Why do we study?

Glaciers make up a fraction of India’s glaciers and are being extensively monitored for change. The country is estimated to have lost nearly 50% of its ice over the past century. In regions like the Himalayas, glaciers have been undergoing accelerated retreat and thinning due to increased summer temperatures. In India, glaciers are vital for the livelihoods of millions of people who depend on them for freshwater resources and sediment supply, and we need to know how they are changing.

Observations show that the Karnali Glacier (Hungsoma Glacier) is a debris-covered glacier of the Himalayas, and its measurements are vital for understanding the dynamics and changes of the Himalayan glaciers. This glacier is one of the few remaining large glacier systems in the world. The glaciers are important for supplying freshwater. The study aims to investigate the changes in the thickness of the glacier and understand the impact of climate change on the glacier.

What do we study?

- The study investigates the thickness of the glacier and its changes over time.
- The study uses remote sensing data and field observations to assess the thickness of the glacier.
- The study focuses on the Karnali Glacier in the Himalayas.

Data collected from 2011 to 2019 shows a decrease in the thickness of the glacier. The study explains that this decrease is due to the increase in the temperature in the area. The study suggests that more research is needed to understand the impact of climate change on the glacier.

What do the results show?

- The thickness of the glacier has decreased over the years.
- The result is consistent across all the types of data used.

Increases in temperature are causing a decrease in the thickness of the glacier. The study suggests that more research is needed to understand the impact of climate change on the glacier.

Next steps

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