Mapping Retreat of Glaciers from ASTER and LISS IV Data: A Case Study from Kumaon Himalaya, India

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The Himalaya is the adobe of one of the world's largest and mostly inaccessible areas of glaciers outside of the Polar regions. However, satellite remote sensing technology helps to study the behavior of this area's ice masses systematically with a cost to time benefit ratio. This study presenting the results of retreat measurements carried out using satellite data of three glaciers (Jhulang Gal, Ghugtan Gal & Damolia Gal) in Kumaon Himalaya, India. The Damolia glacier retreated and generating a glacial valley of 4115 meters long with lateral and terminal moraines and a glacial lake. Due to the recession of Damolia Gal the two tributary glaciers to the Damolia Gal become hanging glaciers. The present study indicating the usefulness of satellite data for studying such environmental changes in the inaccessible regions of Himalaya.



Glacier extent 2005 •••• Moraines Reconstructed Glacier extent

Figure 1 Map showing the three glaciers, lateral and terminal moraines and reconstructed glacier extent