

1. **Bahuguna I.M, Rathore B.P., Brahmbhatt R., Sharma M., Dhar S., Randhawa S.S., Kumar K., Romshoo S., Shah R.D. and Ganjoo R.K. and Ajai, 2013, Are the Himalayan glaciers retreating?, Current Science, 106(7), pp 1008- 1013**

Abstract:

The Himalayan mountain system to the north of the Indian land mass with arcuate strike of NW–SE for about 2400 km holds one of the largest concentration of glaciers outside the polar regions in its high-altitude regions. Perennial snow and ice-melt from these frozen reservoirs is used in catchments and alluvial plains of the three major Himalayan river systems, i.e. the Indus, Ganga and Brahmaputra for irrigation, hydropower generation, production of bio-resources and fulfilling the domestic water demand. Also, variations in the extent of these glaciers are understood to be a sensitive indicator of climatic variations of the earth system and might have implications on the availability of water resources in the river systems. Therefore, mapping and monitoring of these freshwater resources is required for the planning of water resources and understanding the impact of climatic variations. Thus a study has been carried out to find the change in the extent of Himalayan glaciers during the last decade using IRS LISS III images of 2000/01/02 and 2010/11. Two thousand and eighteen glaciers representing climatically diverse terrains in the Himalaya were mapped and monitored. It includes glaciers of Karakoram, Himachal, Zaskar, Uttarakhand, Nepal and Sikkim regions. Among these, 1752 glaciers (86.8%) were observed having stable fronts (no change in the snout position and area of ablation zone), 248 (12.3%) exhibited retreat and 18 (0.9%) of them exhibited advancement of snout. The net loss in 10,250.68 sq. km area of the 2018 glaciers put together was found to be 20.94 sq. km or 0.2% ($\pm 2.5\%$ of 20.94 sq. km).