

**Kulkarni, A.V., Bahuguna, I.M., Rathore, B.P., Singh, S.K., Randhawa, S.S., Sood, R.K. and Dhar, S., 2007, Glacial retreat in Himalayas using Indian Remote Sensing Satellite data, Current Science, Vol 92, No. 1, pp 69-74.**

**Abstract:**

The Himalayas possess one of the largest resources of snow and ice, which act as a huge freshwater reservoir. Monitoring the glaciers is important to assess the overall reservoir health. In this investigation, glacial retreat was estimated for 466 glaciers in Chenab, Parbati and Baspa basins from 1962. Expeditions to Chhota Shigri, Patsio and Samudra Tapu glaciers in Chenab basin, Parbati glacier in Parbati basin and Shaune Garang glacier in Baspa basin were organized to identify and map the glacial terminus. The investigation has shown an overall reduction in glacier area from 2077 sq. km in 1962 to 1628 sq. km at present, an overall deglaciation of 21%. However, the number of glaciers has increased due to fragmentation. Mean area of glacial extent has reduced from 1.4 to 0.32 sq. km between the 1962 and 2001. In addition, the number of glaciers with higher areal extent has reduced and lower areal extent has increased during the period. Small glacial areas and ice fields have shown extensive deglaciation. For example, 127 glacial areas and ice fields less than 1 sq. km have shown retreat of 38% from 1962, possibly due to small response time. This indicates that a combination of glacial fragmentation, higher retreat of small glaciers and climate change are influencing the sustainability of Himalayan glaciers.