Brahmbhatt R.M., Rathore B.P., Pattnaik S., Jani P., Bahuguna I., Shah R.D., Rajawat A.S., 2015, Peculiar Characteristics of Fragmentation of Glaciers: A Case Study of Western Himalaya, India, International Journal of Geosciences, 6, pp 455-463 (http://dx.doi.org/10.4236/ijg.2015.64035).

Abstract:

The areal extent of many Himalayan glaciers is decreasing where number of glaciers is increasing. This increasing number is subject to the fragmentation of limbs of main trunk glacier. However, disintegration of limbs is not observed in all the glacier system. This paper emphases the scenario of the fragmentation occurred in glaciers. Two glaciers from the two different basins have been taken into the consideration for this study. The peculiar characteristic of these glaciers is that, the tributary glaciers are showing less retreat in compare to main trunk glaciers. Due to this reason the rate of shift in snout is higher in main trunk glaciers than tributary glaciers. However, in recent data the tributary glaciers have experienced little higher loss in glacial ice than main glacier. But the shift of snout in main trunk glacier is no doubt surprising since past. Therefore, various parameters have been examined to identify the cause of such a behavior of glaciers. The common factors observed in both the glaciers are accumulation area ratio which is higher, snow line altitude which is lower in tributary glaciers for the period of 2005-2013. Another factor is the orientation as tributary glaciers are towards NE direction. In addition, slope of Dharlang glacier (main limb) is 4˚ where it is 18˚ in tributary glacier.