ABSTRACT

Monitoring glacier variations by remote sensing helps to understand the response to global warming and climate change. Observations of the Batura Glacier fluctuations are valuable not only for glaciology but also for understanding the history of monsoon storms. The glacier terminus retreated about 50 m from the left margin of Hunza River in late 1980 (~23 m yr⁻¹) and then retreated rapidly (~18 m yr⁻¹) in the first half of 1990 (~19 m yr⁻¹). By 1992, the terminus had retreated 92 m from the left bank of Hunza River, 15 m by 1975, and advanced another 33 m by 1978. This change is suggested by apparent increased summer monsoonal precipitation, which may be more sensitive to overall increases of summer precipitation increase. Glaciers in the Western Himalaya and Karakoram are not melting away as are so many glaciers in the Eastern Himalaya. The enigmatic retreat of the white ice stream is perhaps a sensitive indicator of downwasting during possible global warming.

By 1980, the bare ice cliff of 1979 was likely covered with debris. The surface channels of 1979, as the longitudinal of both these pictures, has been invaded by camel thorn bushes and a kettle lake had developed that persists to the present.

THE MAP OF Batura GLACIER

In 1993, south of the dam formed in 1992 and in the footwall area, the ice was in the basin centre, with the sea level of the Batura River out of this basin center.

In 1995, south of the dam formed in 1992 and in the footwall area, the ice was in the basin center, with the sea level of the Batura River out of this basin center.