

[peru glacier retreat](#)

The Cordillera Blanca, Peru has 27 peaks over 6,000m, over 600 glaciers and is the highest tropical mountain range in the world. Glaciers are a key water resource from May-September in the region, [Mark \(2008\)](#). The glaciers in this range have been retreating extensively from 1970-2003, [GLIMS](#) identified a 22% reduction in glacier volume in the Cordillera Blanca. Vuille (2008) noted that the [retreat rate](#) has increased from 7-9 meters per year in the 1970's to 20 meters per year since 1990. One of the glaciers that is continuing to recede is Llaca Glacier descending the west slopes of Ranralpaca.



This glacier has retreated 1700 m from its Little Ice Age moraine, outlined in lime green. Llaca Laguna is impounded by this moraine. The glacier still has a significant consistent accumulation zone and can survive current climate.



Stagnant pockets

of debris covered ice no long connected to the glacier fill much of the valley between the laguna and the current glacier. The terminus despite ending on a steep slope lacks significant crevassing indicating a lack of vigorous flow which will lead to continued retreat of 20-30 meters per year.



This glacier drains

into the river which then flows into the Rio Santa in Huaraz, Peru. [Mark \(2008\)](#) note the importance of glaciers to the Cordillera Blanca watersheds in the Huaraz region receive 35% of

their runoff from glaciers, and the upper Rio Santa likely receives 40%.

