

Kaser, G., D.R. Hardy, T. Mölg, R.S. Bradley, and T.M. Hyera (2004): Modern glacier retreat on Kilimanjaro as evidence of climate change: Observations and facts. *International Journal of Climatology*, 24, 329-339, doi: 10.1002/joc.1008.

Abstract

In recent years, Kilimanjaro and its vanishing glaciers have become an icon of global warming, attracting broad interest. In this paper, a synopsis of (a) field observations made by the authors and (b) climatic data as reported in the literature (proxy and long-term instrumental data) is presented to develop a new concept for investigating the retreat of Kilimanjaro's glaciers, based on the physical understanding of glacier-climate interactions. The concept considers the peculiarities of the mountain and implies that climatological processes other than air temperature control the ice recession in a direct manner. A drastic drop in atmospheric moisture at the end of the 19th century and the ensuing drier climatic conditions are likely forcing glacier retreat on Kilimanjaro. Future investigations using the concept as a governing hypothesis will require research at different climatological scales.