

# From a Glaciers Perspective

## Glacier Change in a world of Climate Change

JULY 17, 2010 BY MSPERTO

### Triftgletscher spectacular retreat and lake formation 2000-2008

The Triftgletscher in the Bernese Alps of Switzerland has undergone a swift alteration in the last decade. The Swiss have been the most methodical chroniclers of glacier changes over the last century. The Swiss Glacier Commission (<http://glaciology.ethz.ch/messnetz/lengthvariation.html>) faithfully recording the annual terminus change of approximately 100 glaciers. In 2009 81 glaciers retreated, 2 advanced and 5 were stationary. One of the retreating glaciers is the Trift, which after a period of limited retreat from 1955-1995 punctuated by a small advance, began a spectacular retreat in 1998, note the below graph from the Swiss Glacier Commission (<http://glaciology.ethz.ch/messnetz/glaciers/trift.html>).

(<https://glacierchange.files.wordpress.com/2010/07/trift-retreat.png>) The retreat began to expose a new glacier lake at 5700 feet (1750 meters) at its terminus in 2000 and then as observed in photographs by Jürg Alean (Glaciers Online)

(<http://www.swisseduc.ch/glaciers/alps/triftgletscher/trift-02-03-repeat-hor-en.html>) the lake quickly grew to its full size from 2002 into 2003

(<https://glacierchange.files.wordpress.com/2010/07/trift-2002-repeat-hor.jpg>)

(<https://glacierchange.files.wordpress.com/2010/07/trift-2003-repeat-hor.jpg>). The summer of 2003 featured remarkably high melt rates in the Swiss Alps mean losses of more than 2 meters of thickness, and no retained snowpack on two of the three glaciers examined for mass balance. and retreat of 99 of the 100 glacier examined, one was stationary. The lake is now 900 m long. By 2007 the glacier no longer was in contact with the lake, and had by 2008 retreated 180 meters from the lake margin. This is a retreat of 1100 meters since 2000. The lake will shrink as the river outlet from beneath the glacier fills part of the northern end of the lake with glacier sediment.

(<https://glacierchange.files.wordpress.com/2010/07/trift-2008.jpg>)

(<https://glacierchange.files.wordpress.com/2010/07/trift-terminus.jpg>)The glacier has a large upper accumulation zone above 9000 feet that retains substantial snowcover (2750 Meters), an upper icefall immediately below this point. The lower icefall descends from 7700 feet (2350) m to 6600 feet (2000 meters). the lower icefall has thinned considerably in the last decade feeding little new ice to the terminus tongue below the icefall the terminus tongue has become stagnant as a result and retreat of this tongue will continue. The story is similar to that of [Rotmoosferner Glacier](https://glacierchange.wordpress.com/2010/02/11/rotmoosferner-retreat-and-dynamic-change/) (<https://glacierchange.wordpress.com/2010/02/11/rotmoosferner-retreat-and-dynamic-change/>) and is driven by the same melt conditions that has led to use of [blankets to protect Stubai Glacier](https://glacierchange.wordpress.com/2009/09/06/stubai-glaciers-protective-blanket/) (<https://glacierchange.wordpress.com/2009/09/06/stubai-glaciers-protective-blanket/>).A new suspension bridge has been built to restore access to the glacier that was lost with the rapid retreat.



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