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Factsheet

Date 26 November 2015

# Data on glacier retreat in 2015

**Despite the presence of substantial snow cover on the glaciers in the Swiss Alps as late as May, the hot summer weather in 2015 resulted in extreme glacier melt. Changes in the ice thickness of 21 Swiss glaciers were recorded for the 2014/15 hydrological year.**

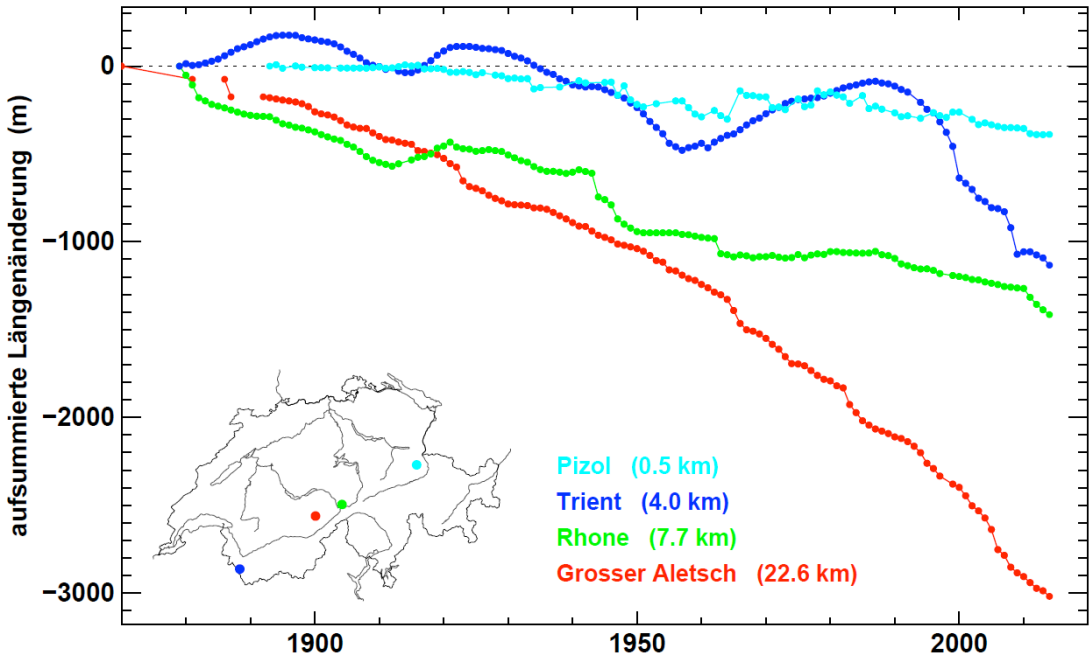
The volume of snow on most glaciers in winter was measured in late April and the snow melt in summer was calculated in late September. The least dramatic fall was observed in the south Valais region where an average loss of ice thickness of around 70 cm was recorded (Findelen Glacier, Allalin Glacier). In contrast, the glaciers located between the Bernese Oberland and Valais were very severely affected with extreme average losses in thickness exceeding 250 cm being observed (Tsanfleuron Glacier, the Plaine Morte Glacier). For the majority of the surveyed glaciers, on both the northern and southern slopes of the Alps, the losses of ice thickness ranged between 100 and 200 cm. Smaller glaciers at lower altitudes were most severely affected by the heat wave as the protective layer of winter snow had already melted at an early stage. Around 10 cm of ice on the tongue of the Rhône Glacier melted every day in July.

When extrapolated for all of the glaciers in Switzerland, the estimated volume of ice lost in the 2014/2105 hydrological year was 1,300 million cubic metres. This represents a reduction of almost 2.5 percent in the current glacier volume. Although this glacier melt was clearly above-average, it did not reach the record values experienced in the heat wave summer of 2003: between 4 and 5 percent of the existing ice reserves were lost that year. The mass balance of the Swiss glaciers for this year is on a similar level to that for 2006 and 2011, which were also very bad years for glacier retreat.

The persistent retreat has also had an impact on hazard potential in recent years. New glacier lakes and unstable glaciers have formed: these must be monitored using suitable methods.

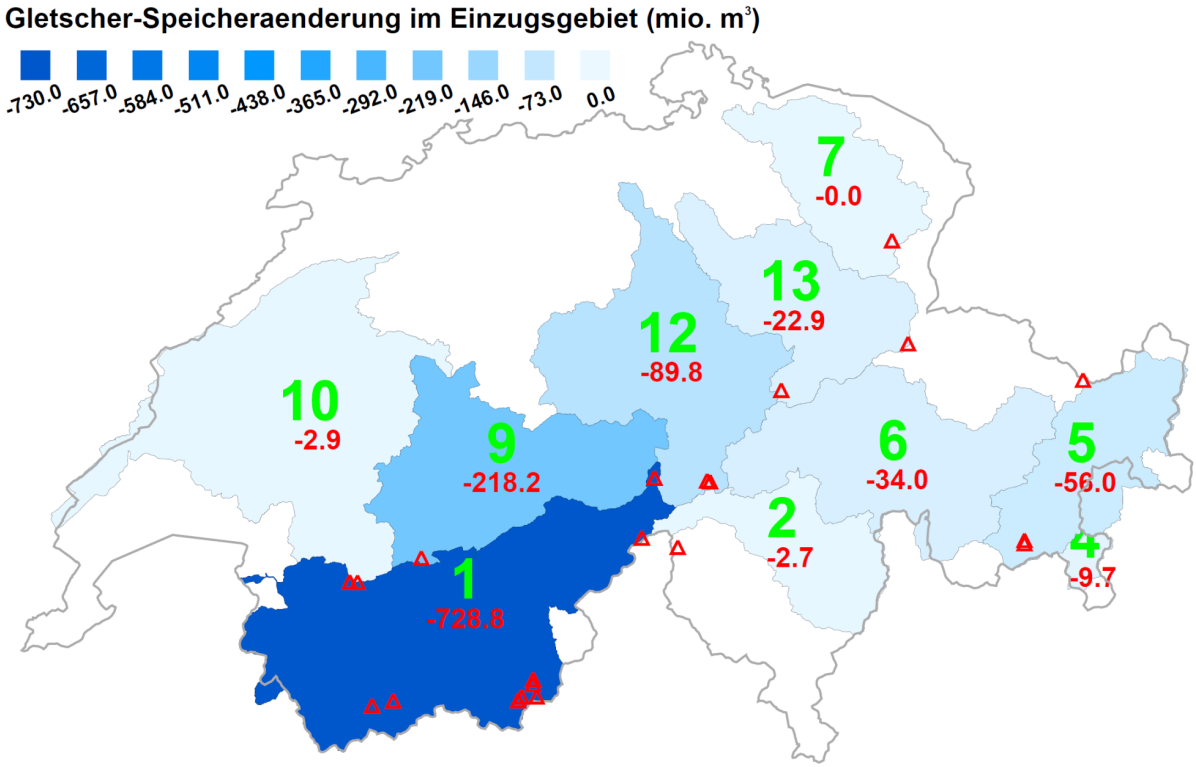
Data on selected glaciers for 2015:

| Name | Area ($km^2$) | Winter balance (m $H_2O$) | Annual balance (m $H_2O$) |
|---|---|---|---|
| ***Rhone (Valais)*** | **15.9** | **+1.71** | **–1.11** |
| ***Findelen (Valais)*** | **13.0** | **+1.19** | **–0.68** |
| ***Plaine Morte (Valais/Bern)*** | **7.8** | **+1.39** | **–2.19** |
| ***Clariden (Graubunden/ Glarus)*** | **5.1** | **+1.59** | **–1.81** |
| ***Gries (Valais)*** | **5.0** | **+1.80** | **–1.80** |
| ***Silvretta (Graubunden)*** | **2.7** | **+1.30** | **–1.70** |
| ***Tsanfleuron (Vaud/Valais)*** | **2.7** | **+1.56** | **–2.78** |




*Source: GLAMOS 2015*

Fig. 1: Cumulative change in glacier length for selected glaciers since 1880.




*Source: GLAMOS 2015*

Fig. 2: Loss of glacier volume in major Swiss catchments for the 2014/2015 hydrological year.