

Review of the paper:

Rapid warming and degradation of mountain permafrost in Norway and Iceland

By Bernd Etzelmüller et al.

The paper presents data on permafrost changes since 2004. Ground temperatures have risen quicker than surface temperatures and the paper attempts to describe the cause of this.

Novelty

The paper is within the scope of the Cryosphere and it goes beyond current understanding of permafrost development. It's strength and novelty are the new and extensive dataset presented. The methods used are not unique but appropriate for the paper.

Quality

It presents new data and data sources from Norway and Iceland. The authors are well aware of the quality of the data and the analyses are sound and important for the scientific community. The purpose of the work is well described and the results are discussed in an appropriate way and they are making use of the references.

Significance

The paper presents important data for the scientific community and for policy makers and it will probably have a substantial impact. It is not really ground breaking but it has a clear and urgent message that permafrost is thawing in an increased speed.

Presentation quality

The paper is well organized and it is clearly written and the illustrations are all very good. There are some minor details that can be adjusted:

The appendix references are a bit unclear. A reference such as (Figure D1b) should rather be written (App. D, fig. 1d)

I am not familiar with the use of negative coordinates. For example, the site Saudafell with the coordinate -15°E. Why not 15°W as it is normally written?

On line 28, there is a reference to van Everdingen 1998 which is missing in the reference list.

In the reference list there is a Smith and Riseborough 2002 paper that I cannot find in the text.