

Interactive comment on “Brief Communication: “An inventory of permafrost evidence for the European Alps”” by E. Cremonese et al.

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Received and published: 21 July 2011

Reply to tcd-5-C479-2011.pdf

We thank the referee #1 for the constructive comments that have helped to improve the manuscript. We carefully considered all comments of the reviewer which are listed below.

1) I would recommend including borehole width as one of the necessary fields, as well as, at least a photograph or link to a photograph of the borehole location.

We thank the reviewer for this suggestion. We will add the possibility to include pictures of boreholes and other evidences. Considering the borehole width, we believe that this kind of information is not strictly necessary for the purpose of the inventory; we believe

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that keeping the number of required information small would facilitate the success of the inventory.

2) p1203, line 27 - replace "from numerous European Alpine countries have contributed" with "...from several European Alpine countries have contributed.."

done

3) p1204, line 25 - replace DinSAR with DinSAR

done

4) p1206, line 13 - consider replacing "quite" by "very" in the degrees of certainty. i.e "quite likely" would become "very likely"

we prefer to use the adjective "quite" rather than "very" to be more cautious.

5) p1027, line 24 - it would be interesting to see here some statistics about the evidence for permafrost absence.

We added the following sentence in page 1027, line 24 61% of point evidence where permafrost absence has been ascertained are ground surface temperature, 17% are boreholes and 22% is represented by geophysical investigations and trenches. Point of permafrost absence have a mean elevation of 2600 m a.s.l. but can reach also elevations higher than 3500 m a.s.l. in particularly warm conditions (e.g. south exposed rock walls).

6) p. 1027, line 25 - data is not available at the website website is under construction. Clicking on the present link, the user is redirected to a temporary server

7) Figure 1 - include scale bar. Legend: indicate period of the evidence included in the map (older evidence - more recent evidence). Indicate in the map the name of countries represented.

The scale bar and the name of the countries have been added in the figure. Point

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evidence are now shown in 3 different colors representing 3 classes of the last observation dates confirming permafrost state (before 1990, between 1900 and 2000 and after 2000). The size of the dots indicates 3 classes (<2 years, 3-8 years, > 8 years) representing the length of observations/data associated with each evidence.

FIG 1 CAPTION: Map of the permafrost evidence acquired in the Alps. The colors of point evidence dots represent 3 classes of last observation dates confirming permafrost state (before 1990, between 1900 and 2000 and after 2000). The size of the dots indicates 3 classes (<2 years, 3-8 years, > 8 years) representing the length of observations/measured data associated with each evidence.

8) Figure 2 - b) using bar width does not allow to see what evidence is present in Germany. I suggest indicating in the legend what appears in Germany or use a different graphical solution. Remove frame around legend and move legend to under the graph. Include in figure caption the meaning of GP, GST, etc...

Germany bar width has been slightly increased to show the evidence type. The frame around the legend has been removed but kept above the bar plot. The meaning of each type acronym has been added in the caption.

FIG 2 CAPTION: a) Relative amounts of point evidence types (borehole (BH), geophysical prospecting (GP), ground surface temperature (GST), other indirect evidence (OIE), rock fall scar (SC), surface movement (SM), trench or construction site (TR)) in the entire inventory and b) by country: bar width represents the relative abundance of evidence in each country (A: 24%, CH: 29%, D: 0.5%, F: 28%, I: 17%; for graphical reasons, Germany bar width has been increased (tripled)).

9) p1210, line 13 - When restricted use is indicated, what is the legal protection that the data owner should expect after entering data in the archive? Please explain better the publication policy in the paper, since this might be central to the success of the inventory.

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The “restricted use” category has been used only for the calibration of a statistical permafrost distribution model for the European Alps (Boeckli, L., Brenning, A., Gruber, S., and Noetzli, J.: A statistical permafrost distribution model for the European Alps, *The Cryosphere Discuss.*, 5, 1419-1459, doi:10.5194/tcd-5-1419-2011, 2011). The points belonging to this category are only twelve, are not shown in the map and thus will not be included in the online version of the inventory.

This category of publication policy will not be available for the online version of the inventory. Since the rationale behind the inventory is data sharing, data provider will only be able to choose between “Usage without restriction” and “Inform before publication”. In the latter case an automatic email will be sent to data owner anytime his data will be downloaded: the email will report who is downloading the data and the intended use.

The following sentence has been added in the section Data Access p 1207, line 27. Since the rationale behind the inventory is data sharing, point evidence publication policy are classified in two categories: “Usage without restriction” and “Inform before publication”. Data belonging to the first category can be downloaded without any feedback to the owner while in the latter case, an automatic email, reporting the contact person and the intended use of the data, will be sent to the owner when a download occurs.

Interactive comment on *The Cryosphere Discuss.*, 5, 1201, 2011.

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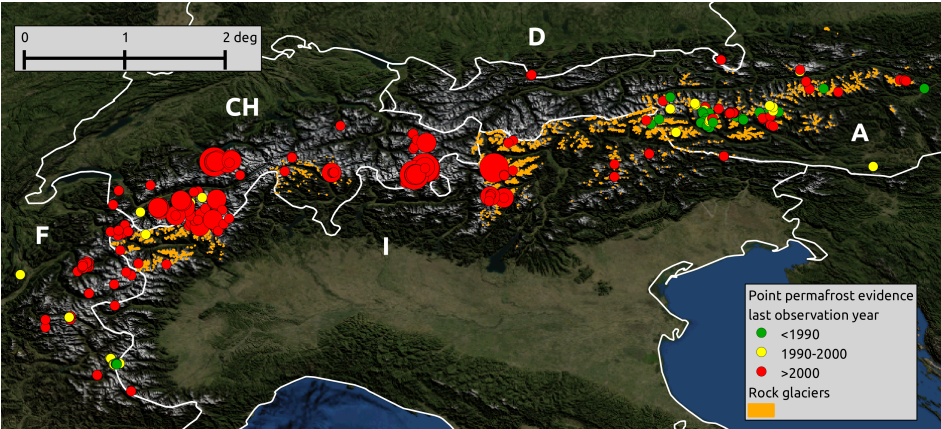


Fig. 1. complete caption is in the reply

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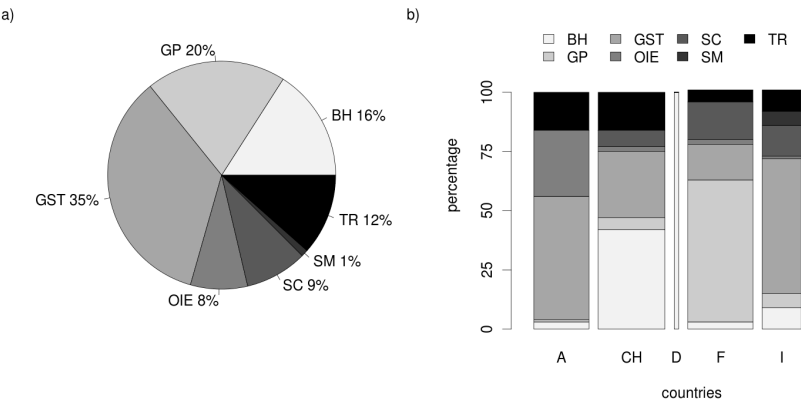


Fig. 2. complete caption is in the reply

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