

Interactive comment on “Warming temperatures are impacting the hydrometeorological regime of Russian rivers in the zone of continuous permafrost” by Olga Makarieva et al.

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Y. Zhang states that this is an important analysis in a data-sparse region and recommends looking at ecohydrological implications more closely, particularly whether warming increases vegetation cover during Autumn. He also suggests adding an inset to Figure 1 to put the basins into regional context. We thank Dr Zhang for valuable suggestions for future studies.

Comment: It will be great if the authors look more at ecohydrological implication. I have not seen any data relating to vegetation. What is vegetation condition there? Does temperature warming increase vegetation coverage during Autumn?

C1

Response: There is a brief description of the vegetation in Section 2.3. Also, we added a Figure 1 which shows the spatial distribution of vegetation. We did not look into vegetation changes with climatic changes yet, but this is a good suggestion. It would be interesting to look at long term trends in vegetation, and we will follow this up. However, changes in monthly temperature occur in July. So it is unlikely to increase vegetation coverage in autumn.

Comment: It would be good to add a zoom out figure into Figure 1, where once can find where the two basins are.

Response: Inset has been added to Figure 2. It shows the location of the basins within the Arctic region as a whole.

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2018-157>, 2018.

C2



Fig. 1. Landscape distribution within the study basins according to Permafrost-Landscape Map of the Republic of Sakha (Yakutia) on a Scale 1:1,500,000 (Fedorov et al., 2018)

C3

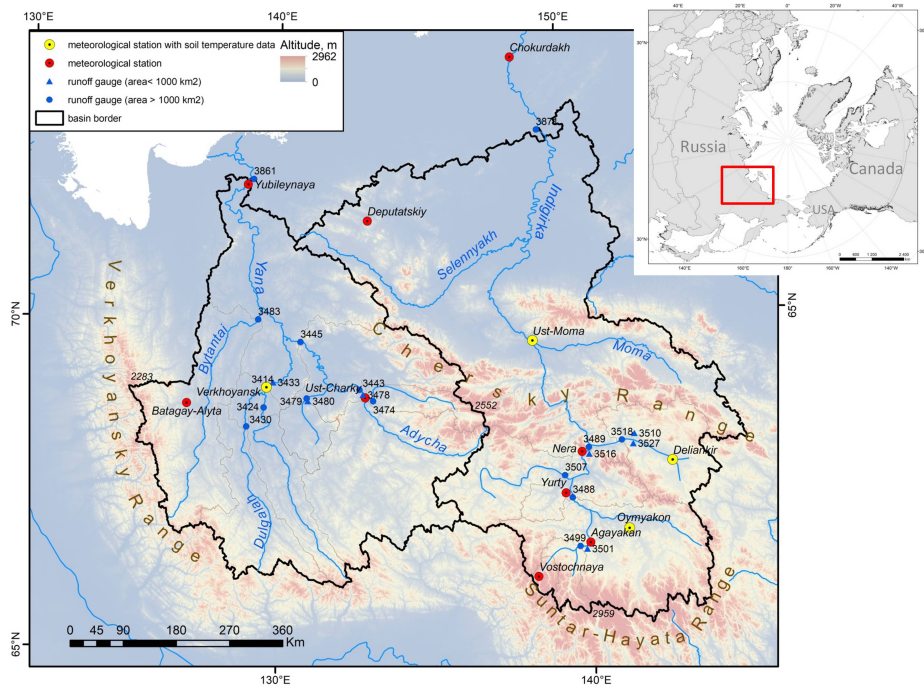


Fig. 2. Meteorological stations and hydrological gauges within the study basins

C4