

Reply to Reviewer:

Comment: URL, DOI, date?

Reply: URL and date of download will be added to reference concerning observed database NORDKLIM – Tuomenvirta et al. (2004) and to reference of web application by which were downloaded modelled databases – Climexp.KNMI (2014), it have been already done. DOI for the applied databases will be added to References in revised manuscript.

Reply to comment Page 4/Line 11 – Abbreviation Mts. will be replaced by Mountains in revised manuscript (Page 4/Line 19 in revised manuscript).

Reply to comment at Page 7/Line 26 – We explain at Page 5/Line 22-23 (revised manuscript) what modelled data sets are: “The second group included eight data sets generated from five gridded databases. The data from this group is hereinafter called modelled data set.”

In order to clarify the sentence Page 7/ Line 30 (revised manuscript) we will extend it: “For these locations were generated modelled data sets from gridded databases.”

Reply to comment Page 9/Line 12 – Abbreviation “LT” will be introduced at chapter 2.2 Climate databases (Page 6/Line 25-26 in revised manuscript): “Seasonal temperature was generated from Luterbacher et al. (2004) database (LT) as well as another one data set was derived by ...”

Abbreviations of all data sets are introduced in Table 1 as their labels.

Reply to comment Page 9/Line 22-24 – Reference value for relative deviation (SE%) is mean of modelled temperature (MEAN). The formula is: $SE\% = (SE/MEAN) \cdot 100$, where SE is Standard Error of modelled data. The units of temperature used in our work are °C and that is the reason why SE% are so big. For example, mean of annual temperature of GISS data set is MEAN=-1.24 °C, SE=±1.56 °C and SE%=±126%. On the basis that in the whole article (including Table 2) we use as a units of temperature ° C, we believe that the potential reader would be oriented correctly.

Reply to comment Page 10/Line 14 – GPSS is a mistake. It will be corrected to GPCC in revised manuscript (Page 10/Line 18 in revised manuscript).

Reply to comment Page 10/Line 11-19 – There is evaluated bias (systematic component of overall accuracy) of modelled precipitation data set in the line 11-16 (Line 15-21 in revised manuscript) and the lines 17-19 (Line 22-24 in revised manuscript) consist the evaluation of standard error (random component of overall accuracy). All absolute values are presented in Table 3.

The difference between the both components will be highlighted in revised manuscript (Page 10/Line 15-24 in revised manuscript).

Reply to comment Page 11/Line 14-32 – At this part of result are evaluated correlations between modelled and observed data and their change with increasing distance of weather stations to Haras. It is based on evaluation of explained variability of modelled data by observed data.

“Useless” of comparison modelled and observed data in the chapter 4 Discussion and Conclusion is discussed in meaning of wider generalization of bias (systematic error, not variability) and so this conclusion do not relate to the evaluation mentioned at Page 11.

In aim to prevent the misunderstanding of this conclusion, there will be added and highlighted, that it concerns to bias evaluation as a systematic component of overall accuracy (Page 11/Line 21-23 and Page 16/Line 5 in revised manuscript).

Reply to comment Page13/Line 23 – Abbreviation “PP” will be introduced at chapter 2.2 Climate databases (Page 6/Line 30 in revised manuscript): “...as well as from Pauling et al. (2008) (PP) and aggregated CRU 3.21 database ...)

Abbreviations of all data sets are introduced in Table 1 as their labels.

Thanks a lot for dedicated time and highlighting of not fully clear parts of our manuscript.

Authors