

LIST OF THE MAIN CHANGES IN MANUSCRIPT

Article title: **How different sources of climate databases influence assessment of growth response in dendroclimatic analyses – case study from Lapland**

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Dear reviewers and dear editor

In following sentences we describe the main changes done in revised manuscript compare to the first version submitted on July 13. 2015. Because changes made in the manuscript are significant, we highlighted only the substantial of them. However, all the referee's comments were incorporated as wrote in our replies on this comments (comments uploaded on November 12. 2015. In addition, revised manuscript all the changes are tracked.

Thank you very much for your valuable comments and suggestions and for time spent with our manuscript.

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The title

- We decided to change the article title from: "*How different sources of climate databases influence assessment of growth response in dendroclimatic analyses – case study from Lapland*" to: **Effect of various climate databases on results of dendroclimatic analysis**

Introduction

- Supplemented characteristic of the KNMI Climate Explorer web application (**Comment at 1539/11, Referee#1**)
- We have formulated three hypothesis (**General comments of Referee#2**)

Material a methods

- Modified and clarified the structure and subsections (**General comments of Referee#2 and comment of Michal Bosela**)
- Finally we extended evaluated databases from three to six modelled databases with 8 gridded data sets. Evaluation of NORDKLIM database we expanded from two to 9 data sets of observed climatic data (**Proposal of Referee#1**)

Results

- Statistical evaluation of the differences between the observed and modelled data of monthly and seasonal temperatures was expanded by gridded data sets (GISS and CRU aggregated) and for precipitation totals by GPCC and CRU aggregated gridded database
- We have adjusted the structure of the article, we have formulated four groups of questions that we responded in different subsections (**General comments of Referee#2**)
- supplementing the results from surrounding four more weather stations we evaluated change of correlation coefficients between modelled monthly temperatures for Haras locality (T_CRU and GISS) and observed monthly temperatures (T40 and T70) and modelled monthly precipitation for Haras locality (P_CRU and GPCC) and observed monthly precipitation (P18, P40, P70 and P110), related to increasing distance of weather stations from Haras locality (**Comment at 1547/22f, Referee#1**)
- we expanded comparison of spruce growing response to climate by evaluating 3 more temperature databases a 6 precipitation databases
- the results were supplemented by evaluating the correlation between temperature and rainfall in months and seasons, where two climatic elements have been shown to be important for the formation of radial growth of spruce

Discussion and conclusion

- we expanded our conclusions resulting from incorporation of new modelled and observed databases of temperature and precipitation (**General comments of Referee#1**)

Thank you