

## ***Interactive comment on “The impact of landscape evolution on soil physics: Evolution of soil physical and hydraulic properties along two chronosequences of proglacial moraines” by Anne Hartmann et al.***

### **Anonymous Referee #2**

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The manuscript addresses relevant scientific questions within the scope of ESSD. The findings correspond to the previous researches on soil chronosequences, but go further including new, not studied well before, physical and hydraulic properties in the analysis. The manuscript well written, scientific methods and assumptions are valid and clearly outlined. I recommend the manuscript for publication after some minor revisions.

1. The introduction gives the general view on the previous soil chronosequences studies, however the number of such studies is so large that it is not clear why the authors have chosen the papers they have referred. Please give a few words to explain the

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choice.

2. The characteristics of the objects are very superficial – no topography and slope characteristics, but according to the Figure 1 they are important in understanding of soil features of the chosen chronosequences. The authors give the reference for the vegetation distribution but it is not characterized in the paper at all. The main criticism is related to the absence of the names of soil types under study. The description of soils is also absent. I recommend including the full characteristics of study objects in the supplementary data but soil type names should be included in the main text.

3. The study objects are not CHRONOSEQUENCES but TOPOCHRONOSEQUENCES with essential difference of topographic locations of different ages. For example, the soil of 110 yrs will never have such characteristics as the soil of 13,5 kys, as its drainage conditions are initially different. Surely, it is almost impossible to find an ideal chronosequence, especially in mountainous conditions. However, it is worth to explain it clear in the Discussion.

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