

## ***Interactive comment on “Hydrological soil properties control tree regrowth after forest disturbance in the forest-steppe of central Mongolia” by Florian Schneider et al.***

### **Anonymous Referee #1**

Received and published: 24 November 2020

The authors of this study aimed to investigate the effect of various soil properties on tree regrowth in disturbed Mongolian forest steppe. The study is well done, written in good language, and sections are well arranged. The study will be of considerable interest for a broad international community. Most of my comments, which are listed below, are of technical nature. I therefore recommend minor revision.

GENERAL COMMENTS - Good language

SPECIFIC COMMENTS - Key words seem a bit unbalanced after reading the Abstract; e.g. permafrost was said to have no major effect; moreover there is nothing about hydraulic features in the key words although this is the main aspect of the manuscript.

C1

- Discussion: Figure 9 seems a nice idea, but could show more information. E.g., maybe it would make sense to hint at the effect of certain factors by making the arrows in different width? Moreover, the favorable or unfavorable soil hydrological conditions might be shown on the left side as an axis. These are just suggestions. - The authors differed for each site between low, moderate and severe disturbance. However, this was not included comprehensively in the Discussion section.

TECHNICAL CORRECTIONS - Introduction and generally: please do not cite more than 3 studies for one certain context or statement. - Material and methods: please give not only the name of the used analytical instruments but also company. - Chapter 4.2 (and generally in the Discussion section): I think it would be good to refer to the respective figures again, instead of just referring to ‘the PCA’. - The following comments refer to the References: > 90 references is too much. I think the list could be shortened by ca. 25%, see also my first comment for the Introduction - In my opinion, it is not appropriate to cite educational books such as Scheffer/Schachtschabel, ‘Bodenkundliches Praktikum’, ‘Spezielle Ökologie der Gemäßigten und Arktischen Zonen Euro-Nordasiens’, ‘Skript Bodenphysikalische Versuche’, ‘Die Landschaftsgürtel der Erde’, even more so as they are written in German language. The same is true for PhD theses (Sommer 2000, Stüber 1998). - Why are some papers in the list written with DOI, others not? - Also, I think it is not nice to cite ‘Deutsches Institut für Normung’ for the applied methods, especially in a manuscript which will be of interest for an international community. - The ‘Guidelines for soil description’ are cited correctly in the text, but written incorrectly in the references list. - For the citation Klinge et al. 2020 the journal is missing. - The authors did not use uniform notation for the journals (abbreviated or not, abbreviations with or without ‘.’). - Generally, I’m not so happy about the large portion of literature in non-English language (German, Russian, Mongolian; together almost 25% of references!). - Figures: 9 figures might be a bit too much. Maybe some of them could be moved to the Supplement, e.g. the climate diagram, or could be converted into a table?

C2

