ESSD-2024-306: Reply to comments from Referee #2

(Reviewer comments in **bold**, author responses in blue)

This work provides a landscape database reconstruction for the Late Pleistocene period (75,000-15,000 ka BP), online and free to use, using the already well used REVEALS approach. I found the background and methods well explained and clear ; I particularly appreciated the part explaining why raw pollen data are not directly proportional to the vegetation cover of a given species. It is significant achievement and will likely be of large us in different scientific communities.

We thank Referee #2 for her/his very positive assessment and we appreciate the valuable input provided on our work.

1-/ Line 304 : « The stadial-interstadial variability is primarily characterised by an increase in open-land percentages. » this sentences is unclear: it could be an increase or a decrease depending on the period (stadial or interstadial. Maybe something like « The stadial-interstadial variability is primarily characterised by a change in open-land percentages. » or be more specific as to the succession of changes from stadial to interstadial.

We agree with Referee #2 that the phrasing is ambiguous. Hence, we have rephrased the paragraph to be clearer and less prone to misinterpretation:

"Stadial-interstadial variability is primarily characterized by an increase in open-land percentages during stadials and a decrease in open-land percentages during interstadials. Such increases in open-land percentages have led to a southward displacement of the tree line in western Central Europe, while limited tree population in eastern Central Europe persist. During interstadials, decreases in open-land percentages are accompanied with a northward expansion of the tree line. These observations are in line with the interpretation of proxy records across Europe (Fletcher et al., 2010; Landais et al., 2022, Tzedakis et al., 2013). However, the scarcity of available pollen records for GI-9 from Northern and North-eastern Europe substantially hinders our ability for further inquiry. Additional pollen records are required to investigate the spatio-temporal framework of tree-line recession in a north-easterly direction during interstadials in more detail."

2-/ Line 305 : Is it really northward? My understanding is that it should be southward as the high latitudes are mainly covered by herbaceous. The tree-line shift to higher latitudes must have been with trees on south and herbaceous on north. Please clarify.

We thank Referee #2 for pointing out this mistake. As mentioned above, we have rephrased the entire paragraph to make it clearer and have also corrected this mistake.