

We are grateful for the corrections – all of them have been implemented in the revised manuscript as suggested.

On behalf of all authors,

Sebastian Westermann

**L.54: Revise sentence to: “ To predict future landscape development in a warming climate that is intimately linked to the carbon cycle of these areas, new and robust model approaches are needed which can potentially be implemented in the land-surface schemes of Earth System Models (ESMs).”**

done

**L66: “be by directly” -> “be directly”**

done

**L349: “400 and 600 m” -> “400-600 m”**

done

**L393: “are ongoing” -> “have been ongoing**

done

**L531: “can very well reproduce measured surface temperatures” -> “can reproduce measured surface temperatures very well”**

done

**L547: “in particularly” -> “, particularly”**

done

**L571: “considerably too early” -> “abnormally early”**

done

**L580: “ We emphasize that the average of 150 point measurements of thaw depth is displayed in Fig. 5, while a considerable spatial variability occurs (average standard deviation of 0.06m ) due to variable ground and surface properties.” -> “ We emphasize that the average of 150 point measurements of thaw depth displayed in Fig. 5, masks considerable spatial variability (average standard deviation of 0.06m ) due to variable ground and surface properties.”**

done

**L584: “dynamics all of which” -> “dynamics, all of which”**

done

**L591: “Fig. 6 is clear evidence” -> “Fig. 6 presents clear evidence”**

done

**L682: “and more” -> “or more”**

done

**L698: “already for a the moderate warming scenarios RCP 4.5” -> “even for the moderate RCP4.5 scenario”**

done

**L701: “, while expanding” -> “and expand”**

done

**L727: “Hereby, in particular” -> “Specifically, ”**

done

**L730: “, but also more flexible... could be incorporated.” -> “, and more flexible... could also be incorporated.”**

done

**L745 “highly feasible” -> “sufficient”**

done

**L747: “constitutes” -> “provides”**

done

**L768: “facilitates comparing” -> “facilitates comparison of”**

done

**L769: “qualitatively” -> “qualitative”**

done

**L773: “can clearly document” -> “clearly documents”**

done

**L789: “, while it” -> “, while in nature it”**

done

**L814: “in particular of” -> “of (in particular)”**

done

**L816: “3D-variability” > “3D variability”**

done

**L819: “in areas, where” -> “in areas where”**

done

**L820: remove word “already”**

done

**L823: “The simulations” -> “The simulations presented here”**

done

**L841: “are encouraging that” -> “provide encouragement that”**

done