

Interactive comment on “Role of vegetation in representing land surface temperature in the CHTESSEL (CY45R1) and SURFEX-ISBA (v8.1) land surface models: a case study over Iberia” by Miguel Nogueira et al.

Anonymous Referee #1

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Review of “Role of vegetation in representing land surface temperature in the CHT-ESSEL (CY45R1) and SURFEX-ISBA (v8.1) land surface models: a case study over Iberia” by Miguel Nogueira et al.

This study used the LSA-SAF satellite product to identify the summer LST biases in two land surface models (CHTESSEL and SURFEX) over Iberia and then proposed a methodology with the more reasonable vegetation data sets to reduce the large LST cold biases during daytime in CHTESSEL. The offline results have demonstrated the improvement of LST simulation. Some comments are as follows:

- 1) As the authors mentioned, LST is a key factor in the surface-atmosphere energy and water exchanges. The LST calculation and bias are closely related to the surface fluxes, especially sensible heat flux. This study addresses only LST and evaporation and needs further investigation to demonstrate the proposed method also reduced the biases of surface fluxes.
- 2) It is important to use a coupling system to further address this method, for the land-atmosphere interactions could provide quite different feedback.
- 3) Global investigation is also required to show its improvement and other impacts.

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