Interesting work! I have some minor comments for the authors' considerations:

1. Is the testbed grid box from real word or artificial assumptions? Please give more details.

2. Whether was the heterogeneity of soil organic matter considered?

3. How does JULES calculate soil albedo for different soil types?

4. Apart from the LSMs listed in Table 1, E3SM Land model (ELM) can represent the soil heterogeneity at different topographic units under a novel topography-based sub-grid structure (Hao et al., 2022).


5. I am curious why the lines for SurfDom and SurfGB overlap with the HResTex run in all variables but HResTexAgg has some differences from the HResTex. Please explain it.