

Review for **“Root zone soil moisture in over 25 % of global land permanently  
beyond pre-industrial variability as early as 2050**

The contents of this study are interesting and, in summary, this study conducted an analysis of future changes in total soil moisture across four different Shared Socioeconomic Pathway (SSP) scenarios. Utilizing data from 14 Earth System Models (ESMs) in CMIP6, the study assessed deviations in total soil moisture from the PiControl scenario, identifying permanent deviations beyond the variability observed in the PiControl scenario. The timing of emergence for these permanent deviations was also evaluated. The primary objective of this study is to systematically organize regional results in a quantitative manner, contextualized within the framework of future SSP scenarios across the global domain. In the last review, I gave major and minor comments as Ref 1. The content of the discussion was actively reflected in figures and sentences for the previous major and minor comments. Thank you for actively responding in detail to all the detailed Major& Minor comments. The discussion of some limitations is also satisfactory. Overall, it was well written, and the ability to present is evaluated as good. This study is evaluated as accept, recommending publishing the paper