I don't believe that authors properly dealt with my concerns in the previous review process. Please understand my comments are important to figure out the important aspects of this study. The authors need to revise the manuscript not to mislead readers of this manuscript. Please understand that misleading possibility comes from Introduction and Abstract mainly and must clarify what are improved from Forrest et al. (2020). Also please give us proper responses to a new reviewer who also pointed out this point. I am also concerned that we may feel a salami slice issues if the issues below are not properly dealt with.

1. This study evaluates the dynamic vegetation state simulated b LPJ-GUESS. LPJ-GUESS is one of famous biosphere models which has been improved by many independent scientists and its evaluations have been done. Eventually, it seems that this study extended Forrest et al. (2020) by coupling LPJ-GUESS to EMAC earth system model. This point should be mentioned clearly in Introduction and Abstract for better readability. The manuscript should clearly describe what this study did in abstract and introduction. Figure such as Fig. 1 in Forrest et al. (2020) is helpful to understand important aspect of this study quickly.

2. Based on the introduction, it seems to us that this study considers a semi-process BVOC emission module by Niinemets (2010) in the EMAC ESM coupling work in this study. s authors pointed out, there are already BVOC modules of ONEMIS and MEGAN in EMAC GCM. Because LPJ-GUESS has a semi-process BVOC emission module by Niinemets (2010), we generally expect that your study combines the LPJ-GUESS BVOC module into the EMAC GCM and we may want to know how such process-based BVOC module improves the simulation.

   However, this is misleading because EMAC ESM uses ONEMIS and MEGAN by series of papers by A. Guenther, not Niinements et al. (1999). Introduction should properly describe this point and must be rewritten for better understanding of improvements by this study.

   It is also important to clearly mention that the BVOC emission module (i.e., process-based model) is not used in the EMAC ESM. For example, in introduction, the manuscript mentioned a few important improvements in the LPJ-GUESS for BVOC simulations (e.g., process-based model for BVOC emission), but such process based model in LPJ-GUESS is not used in the EMAC. It makes us difficult to catch up the important works of this study.

3. Fig. 6 says that LPJ-GUESS produces no shrub in our earth which may be not true. I ask the authors to explain why there is no shrub land by LPJ-GUESS and implications for BVOC emission.

4. This manuscript compares ONEMIS and MEGAN empirical BVOC models to LPJ-GUESS module in Fig. 9 and I ask the authors to include how to calculate BVOC emission in the LPJ-GUESS.

5. The manuscript is saying that BVOC emission from ONEMIS and MEGAN is different (e.g., differences in tropical regions) but it will be better to explain (although that is simple) what makes such differences (e.g., LAI difference, temperature difference) and its implications for future climate simulations and BVOC emission uncertainties.

6. Such as Figure C1-C3 in Forrest et al. (2020), it will be better to quantify EMAC climate biases after improving the coupling processes between EMAC and LPJ-GUESS.

7. We feel that this study needs to mention previous studies to deal with dynamic vegetation model incorporated ESM (e.g., Levis et al., 2003) for clear understanding of what this study did. Also, it will be better if your work is compared to previous simulations (even though with simple or descriptive).

8.

9. Also, vegetation state such as LAI can be evaluated easily with remote sensed data such as MODIS and I am not sure if Fig. 4(d) corresponds to this reference data or not. Please provide more information on the data for Fig. 4(d) and please provide remote sensed LAI data for the reference.