Supplementary Figures

Ecosystem Climate Sensitivities Drive the Divergence in Aerosol-Induced Carbon Uptake Across CMIP6 Models

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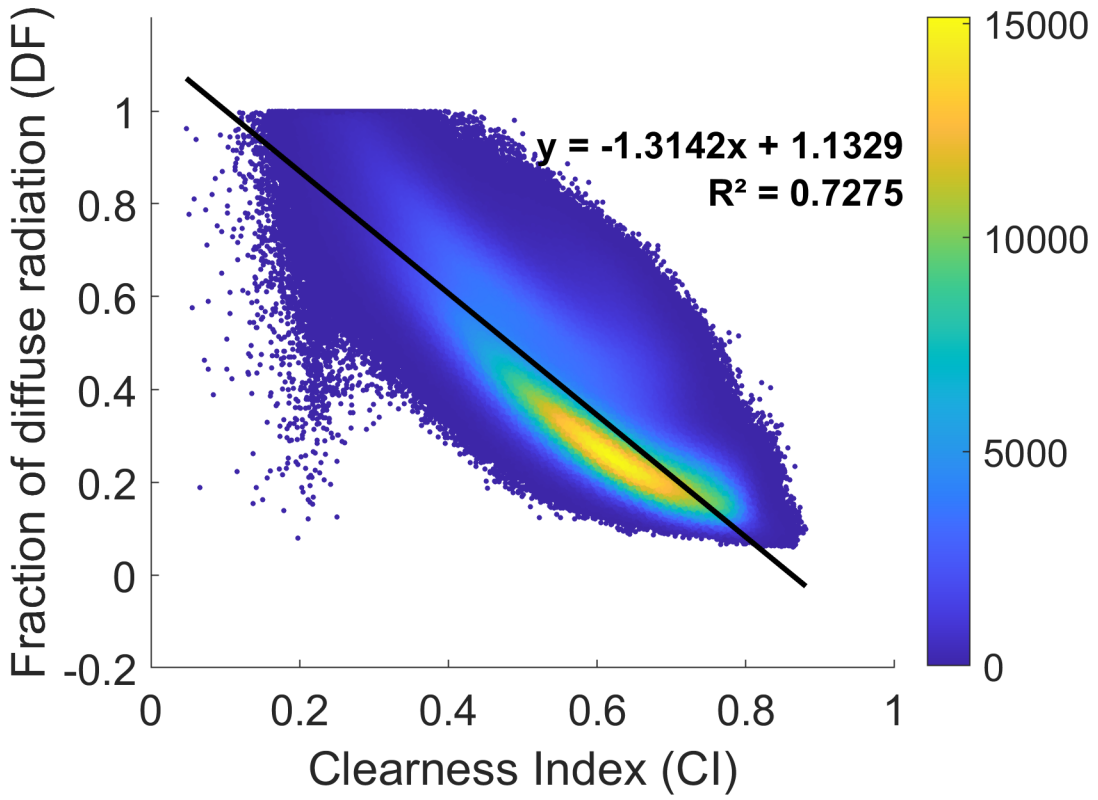

Figure S1. The scatter plots of fraction of diffuse radiation (DF) against the clearness index (CI) from NorESM2-LM and UKESM1-0-LL.

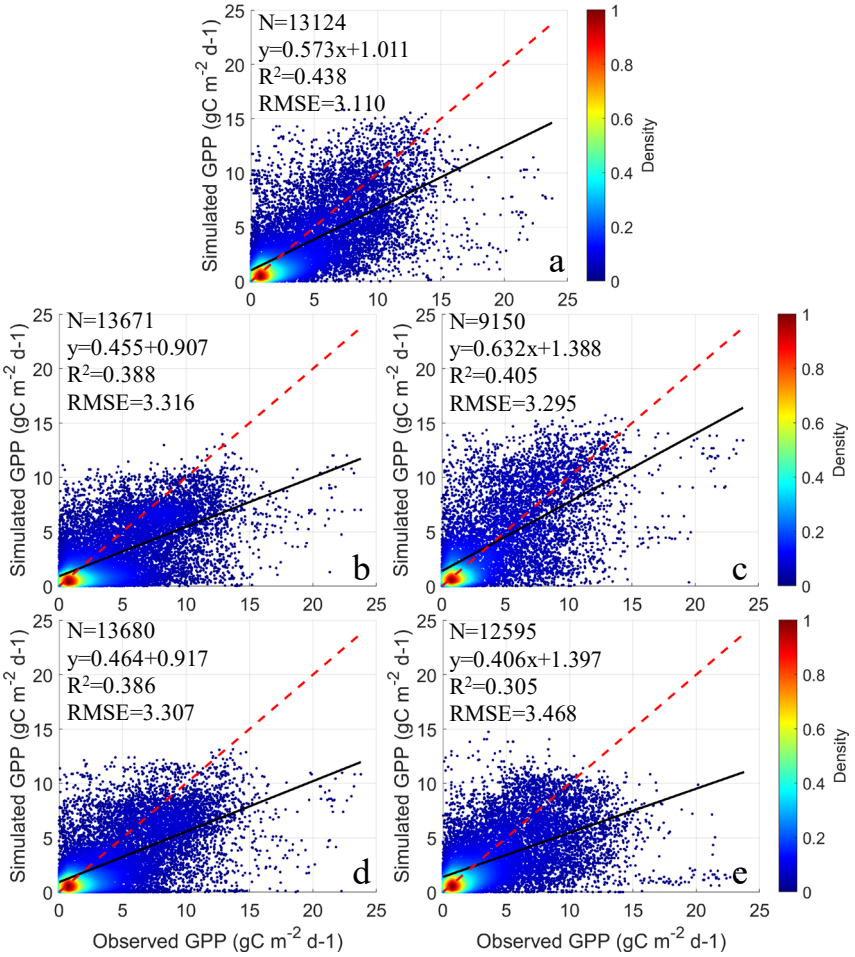

Figure S2. The scatter plots of simulated monthly GPP from CMIP6 models (a. BCC-ESM1, b. IPSL-CM6A-LR, c. MPI-ESM-1-2-HAM, d. NorESM2-LM, e. UKESM1-0-LL) against observed GPP from FLUXNET sites.

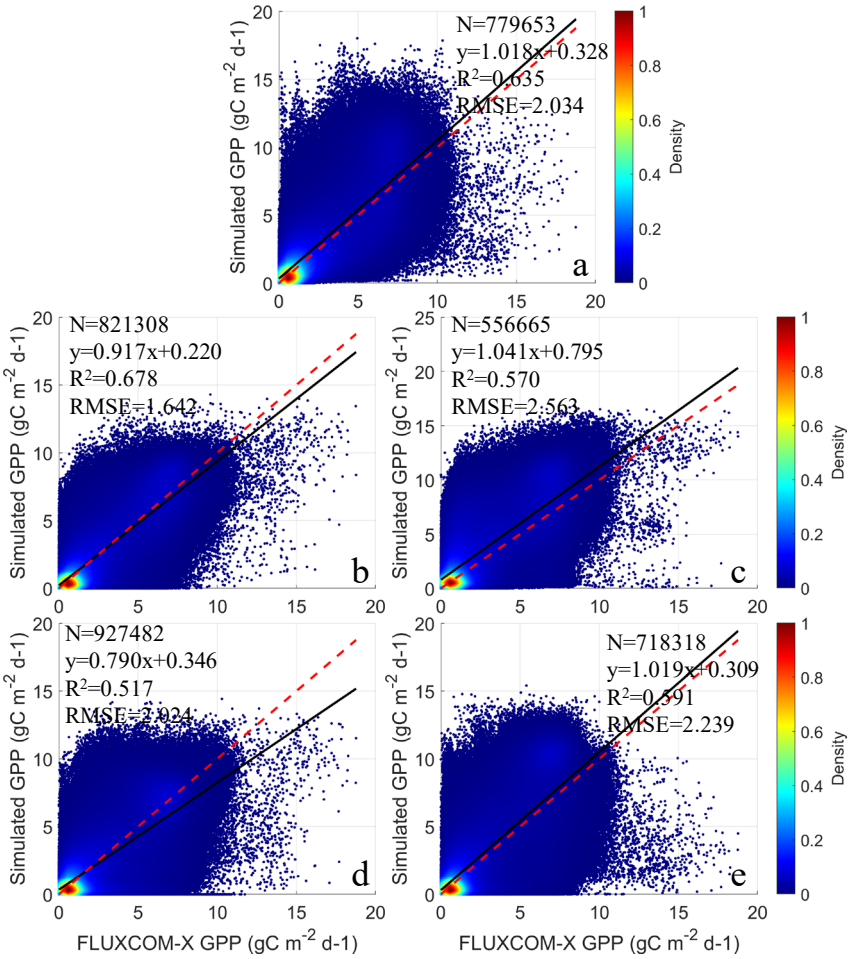

Figure S3. The scatter plots of simulated monthly GPP from CMIP6 models (a. BCC-ESM1, b. IPSL-CM6A-LR, c. MPI-ESM-1-2-HAM, d. NorESM2-LM, e. UKESM1-0-LL) against GPP from FLUXCOM-X.

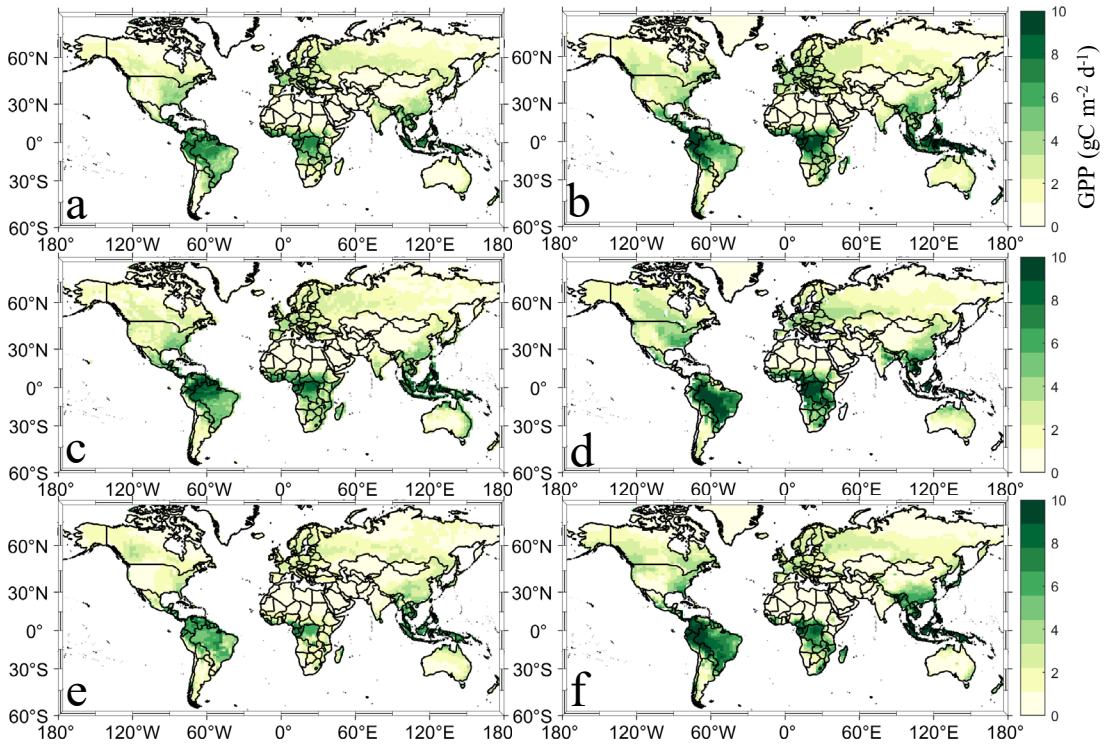

Figure S4. The spatial distribution of observed and simulated GPP from 2001 to 2014 (a. FLUXCOM-X, b. BCC-ESM1, c. IPSL-CM6A-LR, d. MPI-ESM-1-2-HAM, e. NorESM2-LM, f. UKESM1-0-LL).

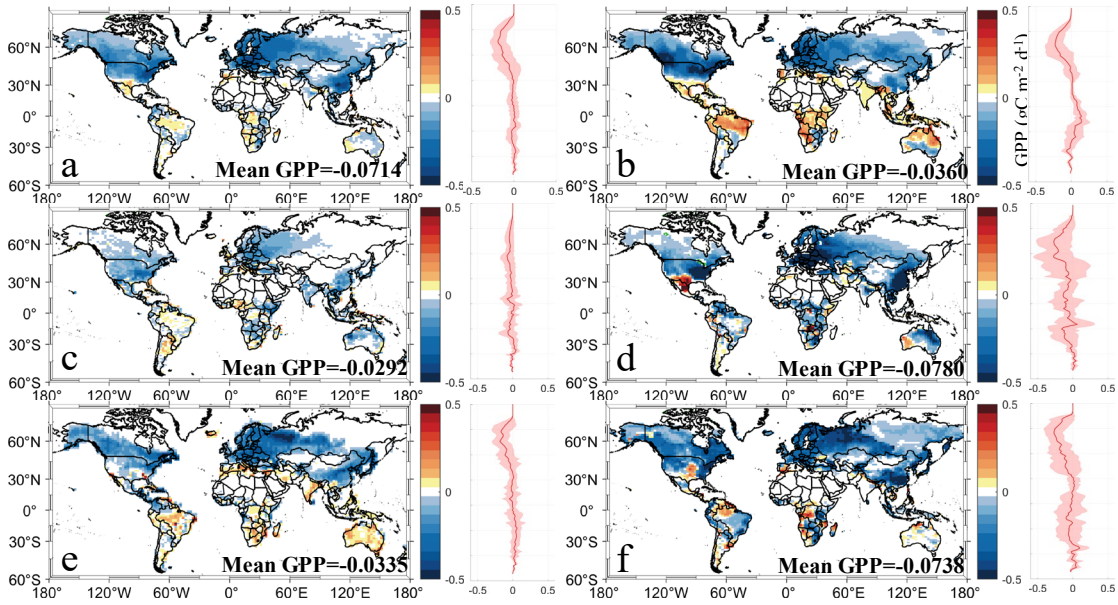

Figure S5. The spatial pattern of changes in ecosystem GPP induced by aerosols from CMIP6 models (a. multi-model mean, b. BCC-ESM1, c. IPSL-CM6A-LR, d. MPI-ESM-1-2-HAM, e. NorESM2-LM, f. UKESM1-0-LL) from March to May.

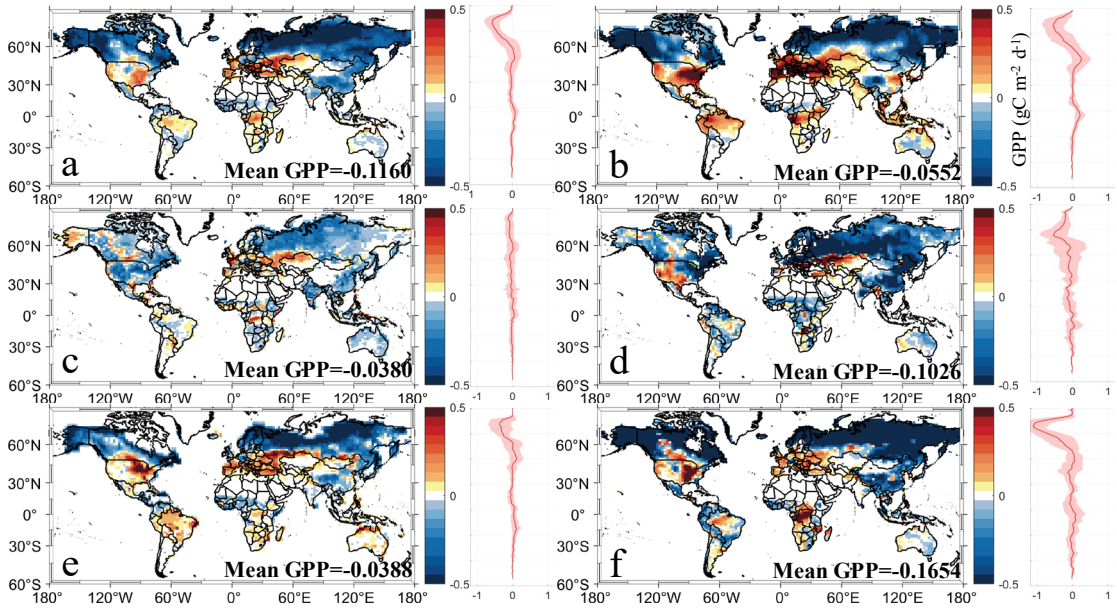

Figure S6. The spatial pattern of changes in ecosystem GPP induced by aerosols from CMIP6 models (a. multi-model mean, b. BCC-ESM1, c. IPSL-CM6A-LR, d. MPI-ESM-1-2-HAM, e. NorESM2-LM, f. UKESM1-0-LL) from June to August.

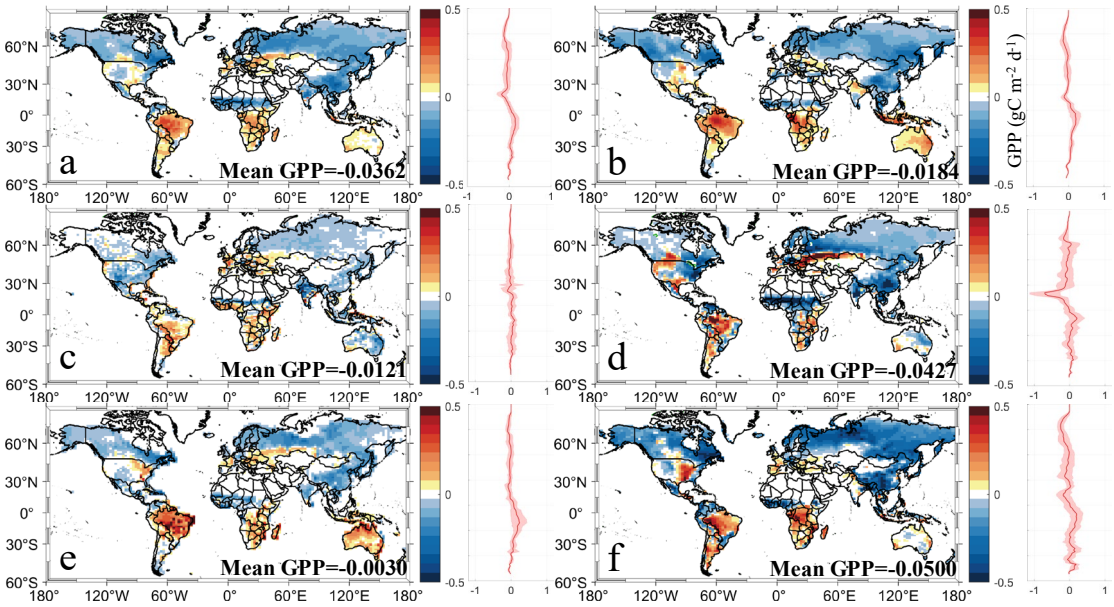

Figure S7. The spatial pattern of changes in ecosystem GPP induced by aerosols from CMIP6 models (a. multi-model mean, b. BCC-ESM1, c. IPSL-CM6A-LR, d. MPI-ESM-1-2-HAM, e. NorESM2-LM, f. UKESM1-0-LL) from September to November.

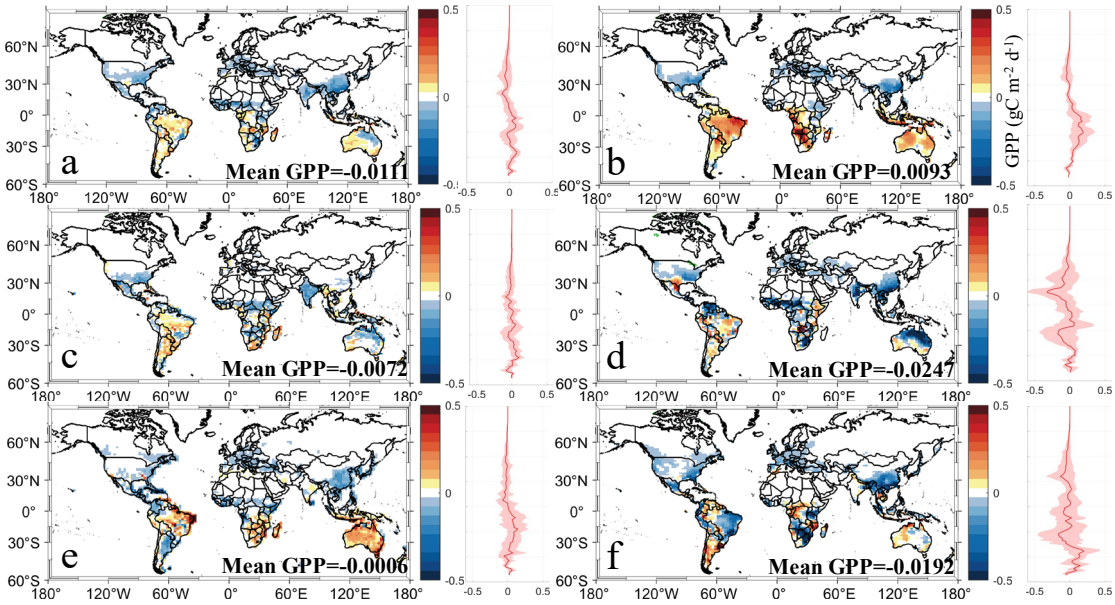

Figure S8. The spatial pattern of changes in ecosystem GPP induced by aerosols from CMIP6 models (a. multi-model mean, b. BCC-ESM1, c. IPSL-CM6A-LR, d. MPI-ESM-1-2-HAM, e. NorESM2-LM, f. UKESM1-0-LL) from December to February.