Supplementary Information 1: Distribution of dominant biomes on land used in this study.
Supplementary Information 2: Spatial correlation plot between precipitation and NPP. The values used here are the mean of the 2070-2100 time period.
Supplementary Information 3: Monthly climatology showing seasonality change in rain and air temperature under RCP4.5, RCP8.5, CCT, MSB, and SAI simulations. The values shown here are 60 to 70°N mean from land area and the mean difference of the 2070-2100 time period.
Supplementary Information 4: Monthly climatology showing seasonality change in NPP and LAI under RCP4.5, RCP8.5, CCT, MSB, and SAI simulations. The values shown here are -60 to 70°N mean from land area and the mean difference of the 2070-2100 time period.
Supplementary information 5: Total vegetation and soil carbon anomaly from RCP8.5 for SAI, MSB, and CCT methods. The values shown here are -60 to 70°N mean from land area.
Supplementary information 6: global vegetation and soil C storage

![Graphs showing global vegetation and soil C storage](image-url)