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Influence of fertilization and vegetation change on climate and terrestrial carbon balance in 4xCO₂ world.

Ryouta O'ishi[1]; Ayako Abe-Ouchi[2]

[1] CCSR; [2] CCSR, Univ. Tokyo

In the present study, we investigated the impact of vegetation change caused by fertilization on climate and terrestrial carbon storage. Distribution of vegetation is strongly dominated by climate condition such as temperature or precipitation. In former study, we have shown that vegetation change in quadrupled atmospheric CO₂ world amplifies global warming and reduce terrestrial carbon storage in mid and high latitudes. In the present study, we newly separated the influence of vegetation change due to fertilization on climate, using a coupled biosphere-atmosphere model.