

The Community Earth System Model: Evaluation and CMIP5 simulations. Activities of the Biogeochemistry Working Group

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The overall goal of the Biogeochemistry Working Group (BGCWG) of CESM is to improve our understanding of the interactions and feedbacks between the physical climate and biogeochemical systems under past, present and future climates. In order to accomplish this, we develop, analyze, and refine a state-of-the-art earth system model that includes terrestrial and marine ecosystem biogeochemistry and subsequently use this model to explore ecosystem and biogeochemical dynamics and feedbacks in the earth system. Our most recently released version of the model, CESM1-(BGC), has been used to perform a suite of experiments that follow the CMIP5 protocols. We present biogeochemical highlights from these experiments.