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Paleo-climate and paleo-vegetation prediction using a coupled atmosphere-ocean-vegetation GCM

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In the present study, we introduced a dynamic global vegetation model (DGVM) into a general circulation model (GCM) in order to predict consistent climate and vegetation including feedback between atmosphere and vegetation. Hence now we can consider not only a climate change as an external forcing to the human evolution but also a vegetation change as a life environmental change upon the human evolution. We introduce 6ka (climate optimum) and 21ka (last glacial maximum) result as examples for warm and cold climate and show an impact of vegetation change upon atmosphere and climate.

Keywords: paleoclimate, paleovegetation, GCM, atmosphere-vegetation interaction