Title: Projection of potential habitat for beech (Fagus crenata) forests in Japan considering three different dynamic downscaling scenarios

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Abstract:

Quantification of uncertainty in climate change impacts is essential for useful support of decision making on adaptation strategies. Recently, we can find considerable number of climate change impact analyses that are explicitly taking account of plausible range of GHG emissions and uncertainties in (global) climate projections. In this study, we estimated climate change impacts on beech forest in Japan by the end of this century with considering uncertainties derived from the choice of RCM to be used for spatial downscaling in addition to the uncertainties in emission scenario and climate sensitivity. While the uncertainty in projected suitable habitat derived from the choice of RCM was smaller than that from climate sensitivity, we could also see considerable uncertainty at local scale. For a good design of conservation strategies at the scale, it might be better or necessary to consider RCM uncertainty as well as the other sources of uncertainty in impact analyses.