



Global warming uncertainties due to carbon cycle feedbacks exceed those due to CO₂ emissions

B.B.B. Booth (1), C.D. Jones (1), M. Collin (1), I. Totterdell (1), P. Cox (2), S. Sitch (1), C. Huntingford (3), and R. Betts (1)

(1) Met Office, Hadley Centre, Exeter, United Kingdom (ben.booth@metoffice.gov.uk), (2) SECAM, University of Exeter, Exeter, UK, (3) CEH, Wallingford, UK

Increasingly policy and decisions makers are turning to climate change uncertainty estimates to inform the decision processes. Much of the current research is focused on quantifying the contributions from the atmospheric physics uncertainties, mainly cloud feedbacks, while contributions from other components are considered secondary. We present work which specifically explores uncertainties in the terrestrial carbon cycle component and show that these uncertainties are as significant as atmospheric physics and represent a larger impact than emission uncertainties presented in standard SRES scenarios.