



Carbon dioxide release from drained upland peat and its implications for climate change

J.G. Rowson(1), F. Worrall(1), N. Ostle(2)

(1) University of Durham Department of Earth Sciences (2) Center for Ecology and Hydrology, Lancaster

It is theorized that water table depth is one of the main controllers of carbon dioxide release from upland peat in the UK. On a drained managed upland peat, it is shown in this study that carbon dioxide release is independent of water table depth. This study has shown that the main controls on carbon dioxide release from peat are soil and air temperature, which have climate change implications. These flux drivers can be used to predict carbon dioxide flux from the peat. This study has shown that peatlands are robust enough to stand major hydrological change events on a short time scale, and not alter the CO₂ fluxes from the site.