



Aquatic microbial respiration along the land ocean-continuum in the Falkland Islands

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Peatland soils act as significant long-term carbon sinks, retaining organic carbon and acting as natural climate change mitigators. These habitats are increasingly vulnerable to land use change and warming, which may result in increased decomposition and the export of stored carbon into the wider environment. Understanding how the decomposition of this historically sequestered carbon might take place is therefore a pressing concern.

This study aims to understand the rate at which peat-derived dissolved organic carbon (DOC) is remineralised by aquatic microbes along the land-ocean continuum. Water samples were collected from across the salinity gradient (0.4 – 35.6 PSU) in 4 peat-dominated catchments in the Falkland Islands. We present rates of respiration and how they are influenced by DOC concentration, composition and the physical environment.

This work contributes to the wider LOCATE project (www.locate.ac.uk).