



The influence of land-use change and season on aquatic microbial respiration in Sarawak, Malaysia

Holly Jenkins (1), Claire Evans (2), Richard Sanders (2), Christopher Evans (3), Annette Burden (3), Patrick Martin (4), Moritz Müller (5), Aazani Mujahid (6), Charlotte Thompson (1), and Daniel Mayor (2)

(1) University of Southampton, Waterfront Campus, UK (hollyjenkins@soton.ac.uk), (2) National Oceanography Centre, Southampton, UK, (3) Centre for Ecology and Hydrology, UK, (4) Nanyang Technological University, Singapore, (5) Swinburne University of Technology Sarawak Campus, (6) Universiti of Malaysia Sarawak

Peat swamp forests store globally significant quantities of organic matter. Anthropogenic activities in these ecosystems are destabilising their integrity and increasing the export of previously sequestered organic carbon into the surrounding waterways. Little is known about the fate of this remobilised material in aquatic ecosystems. This study examined how increasing levels of anthropogenic activity - primarily commercial crops and logging - influence the concentrations and composition of dissolved organic matter in aquatic ecosystems and the concomitant effects on aquatic microbial respiration. We present bottle incubation-derived rates of respiration along three riverine transects in Sarawak, Malaysia in March and August and explore the controlling factors.