

## SOIL MICROBIAL COMMUNITIES AND GHG EMISSIONS UNDER DIFFERENT LAND USE TYPES IN MALAYSIAN PEATLANDS: IMPLICATIONS FOR CLIMATE CHANGE

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Tropical peatlands are complex and globally important ecosystems supporting distinctive biodiversity and high carbon storage. About 68% of the carbon-rich tropical peatlands are present in South East Asia with highest cover in Indonesia and Malaysia. The microbes in peatlands play an important role in overall ecosystem functions and balance. This project aims to find out the effect of disturbance on soil microbial communities and GHG emissions from different land use types in North Selangor Peatlands in Peninsular Malaysia. The initial results of PLFA analysis show that the phenotypic structure of microbial communities was distinct between different land use types, and showed coherent and consistent change with depth within the types. There was a characteristic and distinct shift in community structure at *circa* 1 metre possibly governed by the water table. GHG emissions from different land use types were measured and the future work will be focused on exploring the relationship between the microbial communities and such emissions.