Australian Government
Australian Centre for International Agricultural Research

Carbon flux pathways: from ecosystem to the global carbon market

Key details

Location
Indonesia

Duration

Start Jul 2024 **End** Jan 2026

Budget AUD 500,000

Commissioned organisation
RMIT University

Partners
The Borneo Orangutan Survival Foundation

Project leader
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Program Soil and Land Management

Project code SLAM/2024/116

Research need

This small research activity is designed to establish the infrastructure and pathways to impact for the measurement of the carbon and water dynamics of peatland restoration. The research outcomes will inform the Government of Indonesia's decision-making and action to achieve carbon sequestration in line with its Forest and Other Land Use (FOLU) Net Sink 2030 Policy.

The peatlands of Indonesia are a globally important terrestrial carbon resource and critically important for biodiversity and water cycling. Broad-scale degradation of Indonesian peatlands, particularly extensive drainage through canal excavation, has resulted in peatlands becoming prone to fires that create smoke haze over large parts of Southeast Asia. Degraded peatlands emit significant amounts of carbon into the atmosphere globally.

Restoration of peatlands has benefits for mitigating climate change as well as contributing to economic stability in Indonesia and improving health and wellbeing in Southeast Asia. Peatlands are central to the Government of Indonesia's aspirations to reduce greenhouse gas emissions. The potential carbon negative contribution of peatlands (i.e. net sequestration of carbon) is a large part of the country's Nationally Determined Contributions.

This research activity has complementary objectives. It will enable an upgrade of equipment used to quantify carbon and water fluxes in intact and restoring peatlands, which are the focus of several projects in the ACIAR Peatland Research Initiative. It will

concurrently provide the opportunity to map the pathways to impact for carbon flux data to support the Indonesian Government's carbon sequestration and carbon market aspirations. The learnings from this SRA will also directly benefit the further development of project personnel expertise in monitoring and restoring peatlands and intact peat swamp forests.