Meeting the biophysical information needs of peatland restoration and management stakeholders to support improved and integrated decision-making

Key details

Location

Indonesia

Duration

Start Jul 2024   **End** Jun 2029

Budget   AUD 2,500,000

Commissioned organisation

RMIT University

Partners

Badan Standardisasi Instumen Pertanian; The National Research and Innovation Agency (BRIN); University of Palangka Raya; The University of Melbourne; The Borneo Orangutan Survival Foundation

Project leader

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ACIAR Research Program Manager

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Program   Soil and Land Management

Project code   SLAM/2022/104

Research need

This project aims to ascertain and create the biophysical information required by community and government stakeholders to equitably and sustainably restore, monitor and manage Indonesia's tropical peatlands.

The peatlands of Indonesia are a globally important terrestrial carbon resource and an important area of biodiversity. They are also significantly degraded and are exposed to fire risks that cause a smoke haze over large parts of South-East Asia during the dry season, and particularly in El Nino years. Restoring peatlands, reducing the incidence of fire, and ensuring peatland environments are sustained is important for the economic stability of Indonesia and for the health and wellbeing of a large population in Indonesia and in the region.

Despite significant investment in restoration programs, there is a lack of experience and knowledge related to peatland restoration, resulting in limited evidence of successful restoration efforts. This project aims to

address the gap by understanding the biophysical information needs of stakeholders and supporting integration of knowledge and information sharing within the institutional and governance arrangements around peatland restoration and management. It will contribute to a body of work supported by ACIAR that will provide knowledge, build capacity and deliver methods, processes and tools for peatland restoration. It will improve the targeting and efficacy of efforts to assess, restore and maintain healthy peatland environments and provide meaningful livelihoods to peatland communities.

Activities

- Characterise changes in physical and chemical characteristics of peat soils before and after restoration to develop foundational data sets of peat soil properties.

- Develop a Peatland Condition Indicator (PCI) to monitor and evaluate restoration success across the landscape.

- Sample soils at restoration sites and nearby forest and degraded peatland areas.

- Build capacity in Indonesian institutions to characterise peat soil physical and chemical characteristics.

- Publish initial data sets and communicating results to government and community stakeholders.

- Facilitate targeted and coordinated peatland restoration through partnerships that enable information sharing and integrated planning.

- Engage with other ACIAR and international research activities utilising spectral analytical methods and digital infrastructure in soil analysis.