



Australian Government

Australian Centre for
International Agricultural Research

Forestry

Improving community fire management and peatland restoration in Indonesia



Overview

Smoke haze from indiscriminate burning of peatlands has become a major issue in southeast Asia in recent decades, negatively affecting public health and the economy of several countries in the region.

The problem mainly stems from the burning of rural lands associated with the expansion of oil palm and timber plantations as well as smallholder agriculture. Peatland systems in their natural state do not burn because they are continuously wet with elevated water tables, but degraded peatlands, due to logging, clearing and draining, are susceptible to fires during the dry season.

Indonesia has almost 46 per cent of global tropical peatland, and the Government of Indonesia has taken steps to restore its degraded peatland. But peatland restoration has not been attempted in tropical regions on a large scale. This project will assist Indonesia to reduce peatland fires and restore the peatlands in an effective and equitable way, and by so doing, help to mitigate the smoke haze problem and reduce greenhouse gas emissions.

KEY FACTS

ACIAR Project No. FST/2016/144

Duration: December 2017 to December 2021 (5 years)

Target areas: Indonesia

Budget: AU\$4,060,162

Project leader

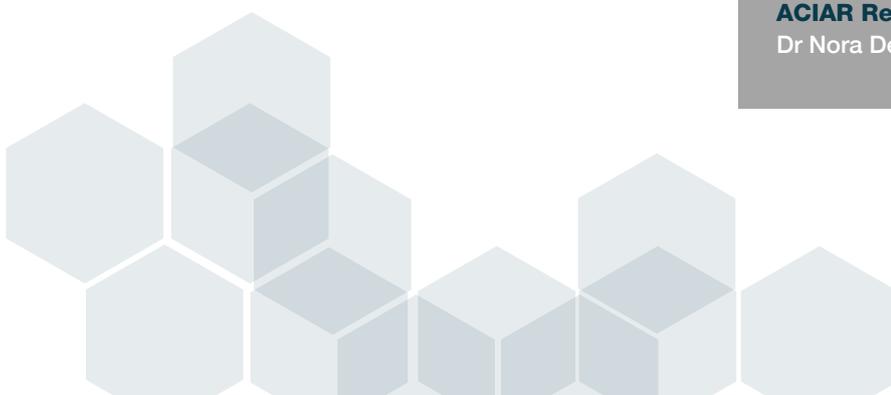
Dr Daniel Mendham, CSIRO

Key partners

- Forestry and Environment Research and Development Agency (FOERDIA)
- University of the Sunshine Coast
- La Trobe University
- James Cook University
- The Australian National University
- Borneo Orangutan Survival Foundation
- University of Palangka Raya

ACIAR Research Program Manager

Dr Nora Devoe and Dr James Quilty



Research/Objective

The aim of the project is to reduce unwanted peatland fires through science to underpin peatland restoration and to develop gender inclusive sustainable livelihoods for men and women living in and around restored peatlands.

The specific objectives are to:

- Prevent unwanted fires by managing the causes and drivers of peatland fire.
- Identify inclusive and sustainable livelihood options for men and women in rewetted peat localities.
- Quantify the effect of peatland restoration practices on peat characteristics, water dynamics and production system options.
- Improve the community, institutional, social and policy aspects of peatland restoration and fire prevention initiatives and policies.
- Support the effective management and dissemination of knowledge for peatland restoration and fire prevention.

Expected scientific results

- Improved knowledge of the biophysical and social causes and drivers of fires and smoke haze in peatland, forming the basis of future research.
- Improved fire danger rating systems for application to peatland.
- Improved production systems in rewet peatlands.
- Improved capacity to empower women in peatland-based livelihood systems.
- Improved knowledge base of the biophysical and social transitions required to successfully restore peatlands while sustaining community livelihoods.
- characterisation of the physical and chemical characteristics of degraded peat before and after restoration.
- Quantification of the costs and benefits of peatland restoration practices.
- Empirically-based understanding of the knowledge-based processes underpinning peatland restoration and fire management.

Expected outcomes

- Increased capacity of the Indonesian Government to restore peatland in a manner that is socially inclusive and biophysically sustainable.
- Increased capacity of FOERDIA and other Indonesian partners to research biophysical, economic, policy and social aspects of fire management peatland management and restoration in an inclusive way.
- Increased capacity to improve the livelihoods of male and female smallholder farmers on restored peat in the focus areas of the project in South Sumatra and Central Kalimantan.
- Reduced peatland burning and fires, leading to reduced smoke haze and greenhouse gas emissions, and a commensurate reduction in negative impacts on public health and local, national, and international economies.
- Improved resilience, communities and industries operating on restored peatland.

