Australian Government
Australian Centre for International Agricultural Research

Supporting greenhouse gas inventories and targeted rice mitigation options for Vietnam

Key details

Location
Vietnam

Duration

Start Feb 2023 **End** Jun 2025

Budget AUD 580,370

Commissioned organisation
Queensland University of Technology

Partners
Institute of Agriculture and Environment;
Queensland University of Technology

Project Leader
Professor Peter Grace

Program Climate Change

Project code CLIM/2019/150

Overview

This project aims to support Vietnam's Ministry of Agriculture and Rural Development (MARD) to perform its new responsibility of managing and improving Vietnam's greenhouse gas (GHG) inventory for agriculture, forestry and land use, using collaboration on rice emissions to strengthen capacities.

Robust national GHG inventory systems can identify emission trends, determine where to focus GHG mitigation action, assess whether mitigation actions planned under Nationally Determined Contributions (NDCs) or elsewhere are proving effective, and provide an evidence base to facilitate decision-making and policy development. Developing an accurate, defensible inventory is a priority for Vietnam as a participating member of the Initiative for Climate Action Transparency.

Vietnam's current NDC includes numerous actions associated with rice and livestock production that are expected to deliver adaptation and mitigation co-benefits – essential for low and middle-income countries that contribute less to the causes of climate change but experience a high degree of vulnerability. However, inventories that can predict and track emissions reductions, and thus inform the choice of specific actions to include in NDCs and supporting policies, need to be fairly advanced. Furthermore, the

governance involved in connecting detailed sectoral inventories to both policy formation and international reporting mechanisms can be complex. Vietnam is still building an inventory and its governance to this level, and MARD has recently gained responsibility for doing this for the agriculture sector.

Project activities and expected outcomes

- Support the Institute for Agriculture Environment of MARD to prepare an updated (to 2020) GHG inventory for the cropping sub-sector in accordance with IPCC 2006 Guidelines.
- Develop recommendations on strategic approaches to advancing the rice inventory to Tier 2 and the associated role of monitoring, verification and reporting, including in ways that consider co-benefits.
- Design and implement experiments to develop two country-specific GHG emissions factors: to assess potential emissions reductions from converting rice-rice systems into rice-shrimp systems and from adding rice straw compost in rice-rice systems.
- Train IAE staff in using the DayCent model to model mitigation scenarios in rice so that mitigation options can be efficiently compared under different environmental conditions without large numbers of field experiments.
- Strengthen information exchange between MONRE, MARD and other partners providing support, including those from the United States Environmental Protection Agency and the New Zealand Agricultural Greenhouse Gas Research Centre.
- Map institutional responsibilities, policies, projects and actors involved in inventory systems governance in agriculture in Vietnam.
- Identify challenges in effective governance, particularly across ministries and between inventory work and policy development, and propose management solutions.
- The approaches taken are expected to strengthen the capabilities of IAE and MARD to efficiently maintain and improve the cropping sub-sector of Vietnam's inventory with a particular focus on rice, to do so in ways that ensure Vietnam can also prioritise actions that deliver adaptation benefits, and to improve the links between research, inventory development, and effective NDC commitments and associated policies.