

# Understanding agrichemical use in SE Asian agriculture



## Key details

### Location

Lao PDR, Vietnam

### Duration

**Start** Oct 2020

**End** Mar 2022

### Budget

AUD 199,679

### Commissioned organisation

CSIRO

### Partners

Commonwealth Scientific and Industrial Research Organisation; National Agricultural and Forestry Research Institute, Lao PDR; Plant Protection Institute

### Project Leader

Lucy Carter

### Program

Social Systems

### Project code

SSS/2020/143



## Overview

This project aimed to develop an understanding of agrichemical use in Laos and Vietnam, through cross-country comparison of institutions and practices influencing agricultural chemical use.

The use of agrichemicals for controlling pests, disease, and weed infestation, and encouraging plant growth has been an important tool to increase agricultural yields, and a necessary contributor to food and nutrition security. However, off-label use of agrichemicals can have significant impacts on human and environmental health.

The project contributes a baseline understanding of chemical use to inform pathways to safer, more effective and efficient use of agrichemicals for future ACIAR research. Approaching pesticide use as a human-centred problem will deliver new insights on how to shift practices toward safer, more efficient and effective use. A comprehensive literature review revealed multiple and interrelated institutional, economic and social drivers which continue to influence off-label agrichemical use. These include: market drivers which create incentives to use chemicals contrary to acceptable guidelines; farmers' own values and evaluations of risk, irrespective of awareness of potential harms and; the broader social and economic transitions that play into household practices including out-migration, land-use changes and increased agricultural commercialisation.

The topic of agrichemical use remains a sensitive topic among local leaders and farmers, even when use appears to be in compliance of regulations. This project provides further support for the re-framing of the problem of agrichemical use being the primary responsibility of farmers and users and instead situates the challenge in a wider, complex system of actors, institutions and drivers.

## Project outcomes

- Assessed available frameworks (including OneHealth) to guide an integrated, systems-based understanding of agrichemical use within a broader social and environmental context.
- An understanding of farmer practices relating to agricultural chemical use through a number of case studies in Laos and Vietnam.
- Developed relationships with government and non-government stakeholders as a foundation for future change processes.



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