



## Promoting IT solutions for pest surveillance and reporting in the Asia-Pacific region

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The objective of this project was to address the inconsistent approach to pest surveillance in the Asia-Pacific region and the poor standard of reporting of surveillance outcomes.

By promoting best practices in surveillance, design, planning and implementation, the project demonstrated the feasibility of a regionally harmonized pest information framework based on streamlined data collection, internationally recognized data standards and simple protocols for exchanging data with existing national systems.

### **STDF/PG/432**

#### **Status**

Completed

#### **Start Date**

01/12/2016

#### **Project Value (US\$)**

\$1,705,455

#### **STDF Contribution (US\$)**

\$997,595

#### **Beneficiaries**

Cambodia  
Lao PDR  
Malaysia  
Myanmar  
Papua New Guinea  
Philippines  
Thailand  
Viet Nam

#### **Implementing Entities**

Australian Department of Agriculture  
Water and the Environment

#### **Partners**

CAB International (CABI)

#### **Background**

The project addresses the inconsistent approach to pest surveillance in the Asia-Pacific region and the poor standard of reporting surveillance outcomes by the National Plant Protection Organisation (NPPO).

A series of coordinated surveillance activities were conducted across the collaborating countries to highlight:

- The use of mobile devices and a customizable smartphone app (P-tracker) to record surveillance data in the field.
- A simple process for importing data into a low-cost, flexible, in-house information system, the Surveillance Information Management System (SIMS).

A series of case studies – which included reporting on surveillance to support market access proposals, defining pest distributions and assisting the early detection of high-priority quarantine pests – were used to demonstrate that a regional framework can enable a cost-effective collection of pest records, robust management of pest data, and the credible and timely reporting of changes in pest status.

Surveillance activities targeted pests and diseases prevalent in diverse crops and commodities that are important in regional trade, including the movement of planting material. Crops include aquatic plants, avocado, bananas, cacao, cashews, cassava, citrus, coffee, cut flowers, maize, mango, musk melon, litchi, longans, oil palm, pineapple, soybeans, sugarcane and watermelon.

The project complements the surveillance work program of the Asia-Pacific Plant Protection Commission and provides impetus to using the International Plant Protection Convention's 2016 Plant Pest Surveillance manual and the Australian Centre for International Agricultural Research's 2005 "best practice" publication titled Guidelines for Surveillance for Plant Pests in Asia and the Pacific.

## **Results**

### ***New technologies for collecting surveillance data***

The Project has provided hand-held devices with the P-tracker app which has been customised to suit the surveillance targets chosen by participating countries. The devices are used in the field to record automatically geocoded, surveillance data. Surveillance data are then downloaded into the SIMS on laptop computers, also provided by the Project. Through a series of workshops, key staff from participating countries have been trained in the use of the devices, P-tracker and SIMS.

By the end of March 2020, staff from all countries have taken delivery of devices, laptops, and software, and benefited from training and mentoring workshops, which included a workshop in Malaysia for all participating countries (February 2017) and single-country workshops in Cambodia, Lao PDR, the Philippines, and Vietnam (between April and June 2017). A second round of single-country workshops has occurred in Cambodia and Thailand (between July 2017 and May 2020).

### ***Planning for surveillance***

During the workshops, staff involved in surveillance activities were trained in best practices for surveillance and guided through a systematic, planning process to develop detailed plans for their chosen surveillance activities. The plans meet the surveillance objective (e.g. to provide a precise distribution map for a pest), define exactly how to perform the surveillance (e.g. 'one surveillance site in each province'), identify personnel and resources required, and prescribe how to achieve the surveillance within a set budget.

A total of 22 surveillance plans (one for each target in each country) and 15 protocols (describing the surveillance techniques) were created during the workshops (see STDF/PG/432 – Table of Surveillance plans and protocols). By the end of 2020, 27 surveillance plans and 29 protocols were developed. Surveillance activities in accordance with these agreed plans and protocols are underway in all participating countries.

## **COVID-19**

Online workshops and training activities targeted at government officials were conducted. Field-based surveillance activities were modified to use smaller group sizes in line with participating countries' social distancing rules, which were supported by using online/video training and e-learning, among other things. Project work plans, budgets and timeframes were revised accordingly, in consultation with key participating country contacts.