Promoting IT solutions for surveillance and pest reporting

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. The project promotes best practices in surveillance, design, planning and implementation, efficient collection and management of surveillance information, and evidence-based reporting on pest status.

This has enabled participating countries to:

- compile credible pest lists which are required to initiate bids for access to lucrative international markets;
- demonstrate pest status to maintain market access; and
- meet the reporting obligations of International Plant Protection Convention (IPPC) signatories.

Specifically, the project is demonstrating the feasibility of a regionally harmonised, pest information framework based on streamlined data collection, internationally recognised data standards, and simple protocols for exchanging data with existing national systems.

STDF/PG/432

Status
Completed

Start Date
01/12/2016

End Date
31/01/2022

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 of surveillance outcomes. This weak performance of what is a basic National Plant Protection Organisation (NPPO) responsibility undermines the credibility of pest status claimed to prospective trading partners. The project complements the surveillance work program of the Asia-Pacific Plant Protection Commission and provides impetus to usage of the IPPC's 2016 Plant Pest Surveillance manual and the Australian Centre for International Agricultural Research's 2005 'best practice' publication "Guidelines for surveillance for plant pests in Asia and the Pacific".

Surveillance activities target pests and diseases of diverse crops and commodities which are important in regional trade, including the movement of planting material. The 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.

A series of case studies, including surveillance to support market access proposals, define pest distributions and assist early detection of high priority quarantine pests, will be used to demonstrate that a regional framework can enable more cost-effective collection of pest records, more robust management of pest data, and more credible and timely reporting of changes in pest status.

The project uses coordinated surveillance activities across the collaborating countries to showcase:

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

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).

A face-to-face surveillance training workshop scheduled for delivery in late March 2020 in Malaysia was postponed because of the novel coronavirus (COVID-19) pandemic. The workshop has been rescheduled and will be delivered virtually from Canberra, Australia and face-to-face in Kuala Lumpur, Malaysia in 2021.

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

The project will workshop training activities targeted at government officials to online mode. Field-based surveillance activities may be modified to use smaller group sizes that respect participating countries social distancing rules and supported by the use of online/video training, e-learning, etc.

Project work plans, budgets and timeframes are also being revised in consultation with key participating country contacts.