



## Beyond Compliance: Integrated systems approach for pest risk management

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This project's objective is to enhance competency and confidence in the Southeast Asian sub-region in applying Systems Approach to trade opportunities through the use of innovative decision support tools.

Successful regional cases were presented at the [side session](#), hosted by the WTO in October 2014.

### STDF/PG/328

#### Status

Completed

#### Start Date

11/07/2011

#### End Date

10/07/2014

#### Project Value (US\$)

\$904,686

#### STDF Contribution (US\$)

\$600,000

#### Beneficiaries

Indonesia

Malaysia

Philippines

Thailand

Viet Nam

#### Implementing Entities

Centre for Agricultural Bioscience International (CABI)

Imperial College of Science, Technology and Medicine (ICL)

Queensland University of Technology (QUT)

#### Partners

NPPOs of Malaysia, Philippines, Thailand, Viet Nam and (year 1) of Indonesia

#### Background

Sanitary and Phytosanitary (SPS) capacity is a priority in all of the Southeast Asian countries and has been the subject of extensive study and development projects. The Philippines, Thailand and Vietnam, among other Southeast Asian countries,

participate consistently in standard setting processes, through the International Plant Protection Convention (IPPC) and the relevant Regional Plant Protection Organisation (RPPO). One of the processes is a pest risk analysis (PRA) process, which purpose is to find the management options that will keep free trade "safe". The International Advisory Group on Pest Risk Analysis (IAGPRA) recognizes that the pest risk management phase – which consists of evaluation of management options and selection of the best phytosanitary measure, or combination of measures, to apply to trade or other pathways to achieve an appropriate level of protection – is often the weakest part of the PRA process. There has been relatively little support for capacity building in the decision-making process for the pest risk management phase of PRA since the advent of the harmonised PRA approach. This project proposes to develop and test a decision-support tool to apply a Systems Approach to Pest Risk Management, which would directly support implementation of International Standards for Phytosanitary Measures (ISPM) no. 14 (Use of integrated measures in a Systems Approach for pest risk management).

This project resulted from a previous STDF [Project Preparation Grant](#) (PPG) that funded a workshop held in Kuala Lumpur in 2010. During the workshop it was concluded that countries were seeking to use the Systems Approach to pest risk management more fully because of problems that were shared between them, such as technical concerns about the food and occupational safety of some single treatments (generally chemical), and the high risk of trade disruption with single treatments when a failure occurs. There was also a perceived power imbalance in trade agreements in which risk mitigation measures were imposed, rather than developed bilaterally.

## **Results**

### ***Greater inclusion of stakeholders in the lead up to market negotiation***

This project increased inclusion of stakeholders in the process of considering preferred and feasible risk management systems, particularly through the use of the tool for mapping pest management measures in the Production Chain. From the start of the project, progress was made in increasing the confidence of the NPPOs in engaging stakeholders in talks about Systems Approach for international trade. This confidence is traced back to the use of the tools and the value of discussions with other NPPOs in similar situations. Although the NPPOs in Beyond Compliance had met with stakeholders from industry in the past, the ability to engage on a complex topic such as Systems Approach was entirely new. The Vietnamese partners reported that a formal network has been formed in the dragon fruit industry, which did not exist prior to this project. The synergy with an IAEA/FAO project on area-wide control resulted in a clear understanding of the importance of "low pest prevalence" around the major production areas and the relationship of that to Systems Approach, particularly for the fruit fly pests.

### ***Built confidence in trade negotiations***

The project goal was to increase confidence and competence in trade negotiations. The project achieved an increase in capacity of relevant NPPO staff and stakeholders to put tools into use through the development of technical resources. The development of capacity in the use of Systems Approach tools has translated into increased confidence in negotiations. The Philippines NPPO staff now have greater confidence to approach trade partner NPPOs with their own ideas and to request review of some existing agreements which appear to them to be too trade restrictive. The Thai partners in the NPPO and Standards Institute are showing enthusiasm for Systems Approach as a way to introduce better practices for thrips control in the orchid cut flower industry and minimise the problems due to methyl bromide use. This is a big shift from anxiety about convincing stakeholders to fully participate in project assignments to a sense of confidence about the future of trade if interceptions are going to be reduced. In the Malaysian context, increased confidence and competence from experiences with the case study led the NPPO to consider accreditation of the Systems Approach as a key approach for production under Good Agricultural Practices (GAP).

### ***More opportunities for trade in a phytosanitary risk context***

The Pest Risk Management component of this project potentially enables a greater openness to new phytosanitary trade agreements based on Systems Approaches. Because of limited capacities, developing economies in the region have approached international standards, particularly those related to Pest Risk Management, from the perspective of meeting importing country requirements. A systematic framework for application of Systems Approach allows phytosanitary and market access personnel to understand contributions of each individual management measure to the reduction of risk. The project already changed experiences for one NPPO with additional trade proposals arising since the case study. Simply using the versatile and effective method to map out and model pest risk management in trade, one equivalence proposal was agreed within weeks (Philippines to Korea). Such a transparent, mutually agreed framework for understanding how much each phytosanitary measure – or measures in combination – reduces the estimated risk can accelerate the trade negotiations.

### ***Consolidated pest risk management in the region***

The project outcomes can address a range of common challenges in market access negotiations and agreements for trade

based on single risk-mitigation measures. Systems Approaches, a combination of integrated measures, may address many of these issues, but at the same time can be complex to develop and negotiate due to structural and quantitative uncertainty about the system. Uncertainty can be managed using probabilistic modelling, thus the project implemented a Control Point/Bayesian Network modelling approach for a set of case studies in SE Asia to show real quantitative evidence of efficacy of measures. It is not necessary to have such a tool to develop a Systems Approach; however, experience and a recent global review concluded that many NPPOs either lack experience with Systems Approach or do not have confidence in its application. This tool clarified thinking around proposed risk reduction measures, proxy indicators for risk reduction (e.g. performance of carrying out the measures) and direct verification measures (e.g. reduced population of the pest) and eased comparisons of similar pest risks, thereby developing a more robust pest risk management in the region.

## **Recommendations**

### ***Share information and success stories about trade using Systems Approach***

The lack of awareness, acceptance and confidence in ISPM 14 and Systems Approach is exacerbated by the fact that few trading partners share their operational or management plans, even though PRAs they are based on are becoming more publicly available. Moreover, there is no current mechanism for sharing success stories about the implementation of ISPM 14 and Systems Approach. A global database detailing successful trade cases using Systems Approach would begin to address this. Combinations of measures have been the basis of substantial trade for decades. The implementation of this ISPM is significantly slowed because NPPOs do not have wide access to the details of this trade.

### ***Disseminate the Beyond Compliance outputs***

Links to the phytosanitary resources page are imperative for effective awareness-raising. However, this cannot be a passive activity. Beyond Compliance materials should be actively promoted and shared with other projects and training courses addressing risk management. Any other initiatives in risk management should be consulted to ensure a harmonized approach to basic concepts so that all useful tools are grouped together for future access and use. At this time, there is no person to play this role. This role might fall to the implementation staff of the IPPC Secretariat, if supported by the CPM.

An effective way of disseminating the Beyond Compliance tools is to train point persons in NPPOs, RPPOs or other relevant organizations who will become experts and facilitators in each region. The entire process of preparing for market access negotiations requires ongoing and long term support, the way that the Phytosanitary Capacity Evaluation (PCE) tool and process has become embedded regionally, but supported centrally.

Another advantage is that a single point person could support use of the concepts for other topics in the country or region, such as food safety, animal health or similar applications. However, even with experience, a network with regular contact with the developers of the tool is advisable. In recent years, BNs are being taken up for a range of applications in plant health. The Beyond Compliance tools are already tailored over years of testing. Without serious consideration of the ideas, assumptions and experiences underpinning the Beyond Compliance tools, uptake of other applications of BN methodology could confuse matters rather than help.

### ***Track the impact of Beyond Compliance***

The tools should be available from the STDF website or the phytosanitary resources page, but for those who want to try them out without a facilitator, there needs to be a communication and tracking systems such as through a licensing system (used by FAO in earlier software development), or the requirement for registering to use the tools when downloading. While a tracking mechanism can provide the number of downloads, it is better to have a two way communication mechanism for future users of the tools. This way, the details of their impact can be collected through short surveys, for example, but also suggestions for improvements and support requests can be gathered. The tracking mechanism can also be designed to provide valuable anonymized data for indicators of the impact of the IPPC and needs assessment for ISPM implementation.

### ***Continue to refine and disseminate the tools***

The tools developed in the Beyond Compliance project were designed for commodities, focusing on two or three pests or pest guilds at a time and would need further revision for plants that are pests (weeds), seeds, or pathways such as conveyances. Additional cases should be shared, while respecting any requirements for confidentiality. The greater the number of real cases shared, the more everyone will understand the process, the tools and their application.

The materials to date are all in English, so those tools ready to use are less accessible to non-English speakers, although the strong emphasis on graphical presentation makes the outcomes understandable in multilingual contexts but also across levels of expertise. Translations of the most relevant materials would complement the training of regional experts and use of

facilitators from each region and dissemination to those who learn best from written explanations.