



## Boosting safe fruit and vegetable exports

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This project aimed to improve access to high value domestic/export markets for fruit and vegetables from Thailand and Viet Nam. It focused on building capacity in Thailand and Viet Nam to meet SPS requirements through the development of a competency-based education and training platform (CETP) for selected fresh/processed fruit and vegetable value chains, and the provision of customized training using a combination of traditional face-to-face instruction and internet-based e-learning.

A result's story on the project is available [here](#). Read more about the project on the [GFSI blog](#).

**STDF/PG/326**

**Status**

Completed

**Start Date**

01/01/2011

**End Date**

30/06/2013

**Project Value (US\$)**

\$719,275

**STDF Contribution (US\$)**

\$581,665

**Beneficiaries**

Thailand

Viet Nam

**Implementing Entities**

Michigan State University (MSU), USA

**Partners**

Can Tho University, Viet Nam

Kasetsart University, Thailand

Michigan State University (MSU), USA

**Background**

Thailand and Viet Nam are important producers of fresh and processed fruit and vegetables, with significant potential to expand high-value exports. Retail and high-value domestic markets in both countries are also growing rapidly, generating increased domestic demand for safe and high-quality produce. Despite differences in export volumes and market development, both Thailand and Viet Nam experience trade problems due to SPS issues. Rejections of fruit and vegetable exports from Thailand to Europe

increased significantly from 12 in 2004 to 38 in 2009.

In 2006, the World Bank estimated that SPS problems generated total losses to the Vietnamese economy (including lost market access, and negative effects on agricultural and public health) surpassing US\$1 billion per year. Common problems include microbiological pathogens, unapproved use of food additives, excessive use of sulfiting agents, etc.

## **Results**

### ***Increased capacity of fruit and vegetable producers, packers and processors to meet international SPS requirements***

Working together with industry, government and private sector suppliers, the project resulted in improved systems for learning, adaptation and dissemination of SPS management and practices that led to increased capacity of small-scale fruit and vegetable producers, packers and processors to meet SPS requirements. The project developed and tested key components of a harmonized, competency-based educational platform on food safety measures for fruit and vegetable value chains targeted at supplier, manufacturer and primary production levels. In partnership with local experts, the project team members adapted generic educational content and learning materials to make them available in local languages and more appropriate for local cultural norms and practices. All localized materials were pilot tested and refined prior to formal launch of training programmes in Thailand and Viet Nam. Project partners launched web sites to disseminate this localized educational content to stakeholders in Thailand (<http://macbeth.agro.ku.ac.th/>) and Viet Nam (<http://fskn.ctu.edu.vn/>) as open educational resources.

Copies of the source material (in English) for the manufacturing modules are available on the MSU food safety knowledge network websites (<http://www.fskntraining.org> and <http://foodsafetyknowledgenetwork.org>).

### ***Increased institutional capacity (public and private) to support SPS capacity building and market access***

The project used internet-based e-learning solutions to provide a scalable platform that could potentially reach thousands of stakeholders. Participants in capacity building programmes were strategically linked to potential high-value market opportunities within the project countries (Viet Nam and Thailand) and export destinations. The harmonized, competency-based curricula/learning modules and materials were adapted for local conditions and institutionalized through key universities and other training organizations involved in implementing the project. Lead trainers were identified and trained in use of materials for improved food safety and SPS management. Internet-based e-learning platforms were also made available to institutional partners to ensure their continued use and sustainability. At the end of the project, the local academic partners in Viet Nam and Thailand committed to implement follow-up programmes to ensure the sustainability of activities initiated under the project.

### ***Enhanced Cooperation by Project Partners and Stakeholders***

The key project partners in Thailand (Kasetsart University) and Viet Nam (Can Tho University) cooperated extensively throughout the project period. This included mutual visits of project staff to their counterpart institutions, site visits in each country to compare production and processing methods, and sharing of training materials. It is anticipated that this cooperation will continue and expand beyond the end of the project.

## **Recommendations**

### ***Project design and expectations must be realistic and engage both public and private sector partners***

By developing a clear institutional framework of collaborations, and robust partnerships, the MACBETH project was able to create the foundations to ensure sustained and scalable food safety capacity development and continued operations, even after the end of STDF support. However, it is important to have the regional, national and local government authorities heavily engaged right from the beginning to ensure alignment with various efforts. It is equally important to engage the private sector stakeholders. Given that it takes substantial time for these linkages and relationships to mature, it is recommended to continue to build on this collaboration in the future. Finally, project design should also actively consider how to manage delays attributed to administrative hurdles, unexpected natural disasters (i.e. flooding in Thailand) etc., that could impede effective implementation of project activities.

### ***Regional partnerships must have a shared vision and need long term institutional support***

MACBETH was primarily a project with a regional focus and partnership with two diverse institutions from the region. It was important for the project partners to have a common vision and to agree upon similar modalities and timelines of implementation. Clear expectations and indicators are necessary to ensure common understanding. Regional cooperation also plays a crucial role in creating new regional visions. Partnerships like those described in MACBETH project have to innovate across traditional institutional and networking boundaries, creating a broader sense of shared interests among formerly diverse actors. Such partnerships demonstrate the challenges inherent in developing a shared vision. Mutual support should be provided to a range of

rural producers and entrepreneurs that face training and marketing difficulties.

***Greater number of factors should be taken into account***

While the project succeeded in providing a platform for a harmonized and competency-based food safety education system, this did not immediately provide access to international and regional export markets for the horticulture stakeholders. Capacity to meet food safety requirements, while necessary for market access, may not on its own be sufficient to expand agricultural exports. For instance, Viet Nam is still developing capacity in a number of areas. Currently, the prime controllers of food safety are the companies themselves, which are completely or jointly owned by foreign companies, unlike in Thailand or Philippines. As new local businesses emerge, it is critical that they are properly equipped with sufficient food safety knowledge and skills to meet the requirements of international markets.