



# Course Outline

## International Virtual Training Course under the collaboration between the Royal Thai Government and the Colombo Plan

### 1. Course Title:

Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability

### 2. Duration:

7-21 August, 2023

### 3. Background and Rationale

TICA is a national focal point for Thailand's international development cooperation. It was established in 2004 to realize Thailand's aspiration to be a contributor to international development cooperation. Believing that global challenges are best addressed through international cooperation and global partnership, TICA continues to work closely together with its development partners to realize the global development agenda through various capacity-building and human resources development programmes. In response to the recent changes in the global landscape of development cooperation, TICA has strengthened its partnerships to harness the synergy of South-South and Triangular Cooperation to tackle global development challenges, including expediting the implementation of Sustainable Development Goals (SDGs). It also continues to realign our focuses in order to deliver Thailand's commitments as a global reliable partner.

Since 1991, TICA, in collaboration with educational institutions in Thailand, has offered short-term training courses are categorized into 5 themes: Sufficiency Economy Philosophy (SEP), food security, climate change and environmental issues, public health, BCG Model related.

The Colombo Plan for Cooperative Economic and Social Development in Asia and the Pacific is a unique intergovernmental organization providing development assistance under the “Planning for Prosperity” motto and the concept of self-help where member countries provide assistance to one another in socio-economic development.

The Colombo Plan was conceived at the Commonwealth Conference on Foreign Affairs held in Colombo, Ceylon (now Sri Lanka) in January 1950 and was established on 1 July 1951 as a cooperative venture for the economic and social advancement of the people of South and Southeast Asia. It has grown from the founding group of seven Commonwealth nations - Australia, Britain, Canada, Ceylon, India, New Zealand and Pakistan – to 28 including non-Commonwealth and countries belonging to the Association of Southeast Asian Nations (ASEAN) and South Asian Association for Regional Cooperation (SAARC). Current Colombo Plan member countries are Afghanistan, Australia, Bangladesh, Bhutan, Brunei, Chile, Fiji, India, Indonesia, Iran, Japan, Republic of Korea, Kingdom of Saudi Arabia, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, Singapore, Sri Lanka, Thailand, United States of America and Vietnam.

In December 1977 the Colombo Plan for Cooperative Economic Development in South and Southeast Asia was changed to The Colombo Plan for Co-operative Economic and Social Development in Asia and the Pacific, to reflect the expanded geographical composition of its enhanced membership and the scope of its activities. The Colombo Plan endeavours to enhance Human Resource Development initiatives in the member countries through its Capacity Building Programmes. The Colombo Plan provides short-term training courses, workshops, scholarships and Master’s degree programmes under the wings of its Capacity Building Programme. All activities are fully or partially funded on cost sharing basis by donors in the Colombo Plan member countries and other International Organizations.

### **Organization/Institution**

Food in good quality and safety is fundamental requisites for human being to live. Moreover, to produce high quality and safe food can increase

trade volume and income of the country. However, living in globalization era, it has rapid change on people, cultures, economics, social, environment e.g. global warming, international trade regulation, non-tariff trade barrier. Those factors have impacts on food security and sustainability of the country. Recently, many countries are at risk of food insecurity especially in developing countries. The definition of food security given by Food and Agriculture Organization of the United Nations (FAO, 2002) is “the state when all people at all times have physical, social and economic access to sufficient, nutritious and safe food to meet their dietary needs and food preferences for an active and healthy life”. Food from animal origin like meat, milk, eggs, and other animal products also supply major amounts of human nutrition, as a source of proteins, fats, vitamin and mineral. Moreover, it is an importance export commodity in many agricultural countries which can support farmer income and increase employment of livestock labor. Apart from meat consumption, the edible insects (for example edible crickets or silkworm) are potential to develop and play a role as a source of protein for future food. Honey is another example that produced by insects which is a valuable commodity in international trade and support reduction poverty of farmers.

Safety of food from animal origin is significant effect to food security because meat and animal product contains high risk of foodborne pathogens, zoonotic agents, chemical and antibiotic residues as well as antimicrobial resistance (AMR) which is a global public health issue. If people access to unsafe food, it is consequently lead to getting illness which pose higher risk to vulnerable group (young, old, pregnant and immunocompromised). Food security could not happened without food safety. Food safety plays the critical role to ensure food security. To control safety in food, hygienic practice should be apply from farm to fork, from animal feed to consumer, and apply regular program for surveillance and monitoring system.

***Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP), Faculty of Veterinary Medicine, Chiang Mai University, Thailand*** has been established since 2003 under collaboration of 2 Veterinary Faculties between Chiang Mai University and Freie University Berlin. The aim of collaboration is to establish a regional center for research, graduate education, academic services on food production and trade of animals and animal origin products from Southeast Asia and the Greater Mekong Sub-

region. The mission of Centre are conducting the international master degree curriculum for students from Asia Pacific, Southeast Asia and South Asia. Moreover, the primary objective of VPHCAP is to build capacity in academic services through training course and scientific international conference every year. Recently, the World Organization for Animal Health (OIE) designated the VPHCAP and Thailand's Department of Livestock Development as an OIE Collaborating Centre for Veterinary Services Capacity Building since 2016 which aims to be a center for developing and increasing the capacity of Veterinarians who work relates to food safety of animal origin, control of animal disease and zoonotic disease in the Asia Pacific region.

VPHCAP has realized the significance of food safety impact to food security therefore, we has attention to organize the short course training on Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability. The aims of conducting the course are to develop and exchange knowledge and skill on food production, food safety in food chain, surveillance and monitor safety in food as well as international food regulations through the training course that provides participants to gain knowledge and experience from lectures, practices, and field visits. The course will be beneficial for food security challenge which has complexity and require multidimensional understanding including academic knowledge as well as socio-economic.

#### **4. Objectives:**

The program is designed to: build an understanding of the production chain of animal origin food and its safety control in the food security constraint.

*After complete this course*, the participants will be able to

- 1) Describe food animal production chain and its importance to global food security
- 2) Illustrate a best practice of food quality assurance and surveillance systems including meat inspection and other products
- 3) Identify potential risks in livestock and animal production chain
- 4) Apply food standard and policy in the international trade framework
- 5) Exchange and sharing knowledge and experience about food safety and food security in food of animal origin

## **5. Course Contents:**

### **Module 1: Animal Production and Food Security**

This module will review the process of animal production, emphasizing the food system in Southeast Asia. A variety of animal products, such as meat, milk, egg, honey or other alternative novel food, will be used as learning examples. The discussion of sustainable development goal (SDGs), Food Security, will encourage the importance of resource limitation, climate change and multidisciplinary collaboration. In addition, the module 1 will provide *special issue on “Sufficiency Economy Philosophy (SEP) in the livestock sector”* which displayed the best practice of SEP application in various livestock and farming project.

### **Module 2: Food Quality Assurance and Surveillance Systems**

This module will specify to safety in food production. Begin with hazard and potential risk identification in each steps, the quality assurance system will be discussed in order to reduce the risks and control them. To maintain the food safety, surveillance system should be implemented. Practical approaches will be demonstrated, such as the inspection of meat and other products, sampling plans and sample collection.

### **Module 3: Implication of Food Standard and Policy in the international Trade Framework**

The final module will integrate the technical knowledge from other modules into food standard and policy. The international trade framework will be highlighted and underline the importance of international standard organization.

## **6. Participants Criteria:**

Applicants must fulfill the following requirement:

- Be nominated by their respective government;
- Young and mid- level professional in related to food or livestock production, quality control and assurance, animal husbandry, government authority, meat inspection, and other-related interest;
- Sufficient English communication skill
- Able to participate in online training using basic computer skill
- Be required to dedicate to this training course as a full time

## **7. Attendance and Evaluation**

Participants who completed the online training will receive E-certificate base on:

- Class participation and discussion via online platform

- Presentation and report submission
- Examination (pre and post-test)

## **8. Venue:**

Online platform

## **9. Expected Results:**

- 9.1 Participants will be able to apply knowledge and skill in their working area
- 9.2 Strengthening the food safety and food security network among participants
- 9.3 Improving and promoting food safety and food security in global strategy

## **10. Organization/ Institution:**

- **Implementing Agency;**

Veterinary Public Health and Food Safety Centre for Asia Pacific (VPHCAP), Faculty of Veterinary Medicine, Chiang Mai University, Thailand.

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- **Contact Person**

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## **11. Expenditure/Funding:**

This training course is funded by TICA and the Colombo Plan Thailand International Cooperation Agency (TICA)  
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## Schedule for the Online Training Programme:

### “Food Safety and Security from Animal Origin: Strengthening the Network for Sustainability”

7-21 August 2023

Veterinary Public Health and Food Safety Centre for Asia Pacific

Faculty of Veterinary Medicine, Chiang Mai, Thailand

Date/ Period /Topic	Time (Thailand time)	Content	Speaker	Note
<b>- Module 1-</b>				
<b>Day 1:</b>				
	09:00-09:30	Opening ceremony		Live
	09:30-10:00	Course orientation Orientation to module1		Live
	10:00-11:00	Overview of global food security and food safety	Thanawat Tiensin	Lecture
	11:00-12:00	Food production and trading system in Southeast Asia	Warangkhan Chaisowwong	Lecture
<b>Day 2:</b>				
	08:30-09:00	Pre-module quiz		Quiz
	09:00-10:00	Pig production	Terdsak Yano and Warangkhan Chaisowwong	Lecture
	10:00-11:00	Chicken production	Nattakarn Awaiwanont and Warangkhan Chaisowwong	Lecture
	11:00-12:00	Beef production	Tawatchai Singla and Warangkhan Chaisowwong	Lecture

	12.00-12.30	SEP in livestock development		Lecture video
<b>Day 3:</b>				
	09:00-10:00	Milk production	Tawatchai Singhla and Warangkhana Chaisowwong	Lecture
	10:00-11:00	Egg production	Warangkhana Chaisowwong	Lecture
	11.00-11.30	SEP in organic layer farming		Lecture video
	11:30-12:30	Aquaculture production	Rutch Khattiya and Warangkhana Chaisowwong	Lecture
<b>Day 4 :</b>				
	09:00-10:00	Honey production	Warangkhana Chaisowwong	Lecture
	10:00-11:00	Edible insects production	Warangkhana Chaisowwong	Lecture
	11:00-12:00	Local backyard chicken production: economic sufficiency production	Suwit Chotinun and Warangkhana Chaisowwong	Lecture
<b>Day 5 :</b>				
	09:00-10:00	Sharing information on food production and trading system	The team	Discussion
	10:00-10:30	Summary of module1		Reflection & discussion
	10:30-11:00	Post-test		Quiz
	11.00-11.30	Module evaluation		Evaluation
<b>- Module 2-</b>				
<b>Day 6 :</b>				
	09:00-09:30	Orientation to module2		Live
	09:30-10:00	Pre-module quiz		Quiz



	10:00-11:30	The role of veterinarian on food safety at local, national and global level	Thanawat Tiensin	Lecture
	11.30-12.00	Sharing experience from each work: How do they contribute to food safety?		Discussion
	13.00-13.30	Food safety assurance system		Lecture video
	13.30-14.00	General Good Manufacturing Practice		Lecture video
	14.00-14.30	Exercise for general GMP	Tongkorn Meeyam and Duangporn pichpol	Practice
	14.30-15.30	Specific GMP	Tongkorn Meeyam and Duangporn pichpol	Lecture
	15.30-16.00	Exercise for specific GMP	Tongkorn Meeyam and Duangporn pichpol	Practice
<b>Day 7 :</b>				
	09.00-10.00	Lecture on principle of HACCP	Sompiss Jullabutradee	Lecture
	10.00-11.00	Exercise: HACCP	Tongkorn Meeyam and Duangporn pichpol	Practice
	11.00-12.00	Discussion from Exercise: HACCP	Tongkorn Meeyam	Discussion

	13.00-14.00	Principle of risk analysis	Warangkhana Chaisowwong	Lecture
	14.00-15.00	Risk-based food safety	Warangkhana Chaisowwong	Lecture
	15.00-16.00	Exercise for risk-based food safety	Warangkhana Chaisowwong and Veerasak Punyapornvittaya	Practice
	16.00-16.30	Discussion from exercise		Discussion
<b>Day 8 :</b>				
	09.00-10.00	Meat inspection and animal Welfare	Tongkorn Meeyam	Lecture
	10.00-11.00	Species specific meat inspection: Pig	Tongkorn Meeyam	Lecture
	11.00-12.00	Species specific meat inspection: ruminant	Duangporn pichpol	Lecture
	13.00-14.00	species specific meat inspection: poultry	Warangkhana Chaisowwong	Lecture
<b>Day 9 :</b>				
	09.00-10.00	Principle of surveillance and monitoring system	Orapan Arjkumpa	Lecture
	10.00-10.30	Exercise	Duangporn Pichpol	Practice
	10.30-11.00	Discussion from exercise	Duangporn pichpol	Discussion
	13.00-14.00	Sampling techniques	Duangporn pichpol	Lecture

	14.00-15.00	Sampling plan	Duangporn pichpol	Lecture
	15.00-16.00	Hazards in food from animal origin production	Chalita Jainonthee	Lecture
<b>Day 10 :</b>				
	09.00-10.00	Detection method of biological hazards	Duangporn pichpol	Lecture
	10.00-11.00	Detection method of chemical hazards	Montira Intanon	Lecture
	11.00-11.30	Best practice: National food surveillance		Lecture video
	11.30-12.00	Exercise: National food surveillance		Assignment
	12.00-12.30	Reflection and discussion	Duangporn pichpol	Discussion
	13.30-14.30	Example of data management: scientific evidence to policy implementation	Duangporn pichpol	Lecture
<b>Day 11 :</b>				
	09.00-09.30	Exercise of module integration	Duangporn pichpol	Discussion
	09.30-10.00	Report back of best practice: national food surveillance		Assignment
	10.00-10.30	Reflection and discussion	Duangporn pichpol	Discussion
	10.30-11.00	Summary of food quality assurance and surveillance system	Tongkorn Meeyam	Lecture

	11.00-11.30	Post-test of module2		Quiz
	11.30-12.00	Evaluation of module2		Evaluation
<b>- Module 3-</b>				
<b>Day 12 :</b>				
	09.00-09.30	Pre-module quiz		Quiz
	09.30-10.00	Orientation to module3		Live
	10.00-10.30	Sharing experience from each work		Forum
	10.30-11.00	Overview of international trade framework	Watcharapon Chotiyaputta	Lecture video
	14.00-15.00	Bilateral agreement for international trade	Watcharapon Chotiyaputta	Lecture video
	15.00-16.00	Experience sharing for international trade		Forum
<b>Day 13 :</b>				
	09.00-09.30	World Organizational for Animal Health (WOAH)	Ronello Abila	Lecture video
	09.30-10.00	SPS and TBT agreement	Songkhla Chulakasian	Lecture video
	10.00-10.30	Codex Alimentarius	Namaporn Aattaviroj	Lecture video
	10.30-11.00	Experience sharing for international organization		Forum
	11.00-11.30	Public policy process	Patamawadee Jongruck	Lecture video
	11.30-12.00	Food policy	Chalita Jainonthee	Lecture video
	12.00-12.30	Reflection and discussion: food policy and international standards	Duangporn Pichpol	Forum
	12.30-13.00	Post-test of module3		Quiz

	13.00-13.30	Evaluation of module3		Evaluation
<b>Day 14 :</b>				
	09.00-16.00	Project assignment	Warangkhan Chaisowwong	Assignment
<b>Day 15 :</b>				
	09.00-11.00	Project presentation	Warangkhan Chaisowwong	Presentation
	11.00-11.30	Course wrap up	Warangkhan Chaisowwong	Reflection &discussion
	11.30-12.00	Evaluation		Evaluation
	12.00-12.30	Final examination		Examination