

**International Training Course on  
“Food System: The Challenge to Changing the Global Environment”  
Faculty of Environment and Resource Studies  
Mahidol University, Thailand  
8 – 23 July, 2025**

**1. Course Title:**

Food System: The Challenge to Changing the Global Environment

**2. Duration**

8 – 23 July, 2025 (16 days)

**3. Background and Rational**

Food is a topic that has become the center of all aspects of modern life today. Our body need food as well as clean water and fresh air. At present, the world has developed rapidly. Questions about producing quality food that is sufficient for people on earth and does not destroy the environment: what is healthy food? How to produce food and manufacture any type of food is best for the environment. Food education has become a part of a wide range of educational programs ranging from science to humanities and has created literature about food systems and relationships with modern life. Health professionals and the public have realized that food is not just a source. But also reflects the values and culture of each individual. The increased attention on food resulted from a period of radical changes in the way food production, food manufacturers, and food factories.

A critical component of the food system is food security. The World Food Summit (1996) states that food security "exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

In addition, the second goal of sustainable development is to eliminate hunger worldwide by 2030. This involves promoting sustainable agricultural practices, supporting small-scale farmers, and allowing equal access to land, technology, and markets.

In the past decades, Thailand has changed from an agricultural country to a semi-industrialized country, and food products have become the country's top products. Thailand's food system is a diverse food source for the country's consumers and the world population. Thai food is diverse and a favorite of people around the world. Thailand wants to be the world's kitchen.

Thailand's food system ranges from small households to community-level to large-scale export companies, and most sectors have adopted King Rama IX's sufficiency economy philosophy as a guideline. In addition, Thailand needs to develop the country to achieve sustainable development. However, the world's future will likely change, mainly due to climate change. Therefore, Thailand, which has a reputation for food systems, must be prepared to maintain good food systems for the local and global population.

Faculty of Environment and Resource Studies, Mahidol University, has foreseen that the food system will be an enormous critical issue for scientists, politicians, and the human system. Thus, this training and workshop have been designed to be a wakeup call for humans to take responsibility for food security and the food system, regardless of whether they act as producers,

consumers, or middlemen, sharing knowledge and data and setting up a platform of the possibility of creating a food system network.

#### **4. Objectives**

4.1 To provide a broad overview of the methods and tools available for conducting knowledge regarding the food system context in various dimensions;

4.2 To exchange experiences and knowledge about food systems to eliminate hunger from all mankind

#### **5. Course Contents**

##### **5.1 Course Outline**

1. Overview of the food system
2. Feed the world with Thailand's food security policy: Now and beyond
3. Impact of climate change on agriculture and adaptation strategies: in Thailand
4. Climate-smart agriculture implementation for agricultural sustainability
5. Mangrove ecosystem as 'food basket' for all
6. Managing coastal community networks for food security
7. Community-based participatory to improve food security policy advocacy and implementation
8. Mechanisms for greenhouse gas reduction and adaptation to climate change impacts from the agricultural sector
9. Role and management of soil for food security and nutrition
10. Aquaculture-certification and eco-labelling
11. Agriculture and value chain: Improve food quality and food value chain: MU
12. Postharvest technology and food preservation technology
13. Food and nutrition
14. Food waste management
15. Adding value to agricultural waste: A case study of rice straw and corn husks

##### **5.2 Workshop/Practices**

Case studies on the application of food system

##### **5.3 Study Trip/Field Trip**

Two-day field trip to visit the East Coast: Agriculture, Orchard, Aquaculture at **Chacheongsao, ChonBuri, and Rayong Province**

##### **5.4 Advance Assignments**

1) Country Report:

1.1 General information of participant (1 page of A4 size paper) including Name of the participant, Educational background, Country, Name of Organization, Participant's position, Duties and responsibilities (Briefly)

1.2 General information of the Country (1-2 page of A4 size paper) including Geographical status of the country, Climate, Population, Official language, Social, Educational, and Economic conditions, Gross National Products (GNP), Per-capita Income, Major import and export goods, Natural resources and environmental situation, etc.

1.3 Content (up to 4-5 pages of A4 size paper): The details in your country report should cover the following topics.

- a) The current situation on the food system in your country
- b) Country policy related to the food system

- c) The best available technologies/ practices related to food security and the food system, regardless of whether they act as producers, consumers, or middlemen

1.4 Lessons learned from past practices of the food system

1.5 Summary and Recommendation (1 page of A4 size paper)

1.5 References and further information (If any) (1 page of A4 size paper)

1.6 Submission date: No later than **15 June, 2025**

## 6. Participant Criteria

- Age: Less than 40 years old
- Work experience in related fields: More than two years
- Education: Equivalent to a Bachelor's Degree or Higher
- Language: Good command in English

## 7. Venue

Faculty of Environment and Resource Studies, Mahidol University

Accommodation: 1. Hotel at Salaya

2. Hotel at the field site for 1 night

## 8. Expecting Results

Upon completion of the course, participants are expected to have:

- Better understanding of the food system
- Meaningful information about the food system in Thailand
- Better understanding of further applications through practical sessions and excursions

## 9. Evaluation

- No paper examination after completing this training course
- Participants must attend the class, field trip, and workshop no less than 80% of the total training period

## 10. Institution

### 10.1 Executing/Implementation Agency

#### - Implementation organization:

Faculty of Environment and Resource Studies, Mahidol University

#### - Staff availability:

12 Lecturers will participate in this training.

30 Supporting staff will be in charge of this training.

#### - Training materials:

Handouts and other documents related to course topics will be given/ available to trainees.

#### - Other facilities:

Phone, fax, and internet access are available

#### - Address:

Faculty of Environment and Resource Studies, Mahidol University  
999 Phuttamonthon 4 Rd., Salaya, Phuttamonthon, Nakhon Pathom 73170

#### - Course Leader:

Dean of Faculty of Environment and Resource Studies

#### - Course Director:

Associate Professor Dr. Nathsuda Pumijumnong

#### - Contact Person:

Ms. Vilinthorn Xuto

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## 11. Expenditure and Funding

### 11.1 Sponsored by:

Thailand International Cooperation Agency (TICA)

### 11.2 Estimated Cost: Operational cost only

Number of trainees: 20 persons

Course duration: 16 days

No.	Item	Rate	Calculation	Total (Baht)
1	<b>In-class lecturers</b> (45 hours)	2,000 Baht/hour	2,000 x 45	90,000
2	<b>Field lecturers</b> (28 hours)	1,000 Baht/hour	1,000 x 28	28,000
3	<b>Facilitators and Overtime</b>			
	Weekdays (5 persons, 10 days)	Baht/hour/person/day	50 x 4 x 5 x 10	10,000
	Weekends (5 persons, 6 days)	Baht/hour/person/day	60 x 7 x 5 x 6	12,600
4	<b>Field trips</b>			
	<b>4.1 Pre-survey</b>			
	Daily subsistence (4 persons, 2 days)	240 Baht/person/day	240 x 4 x 2	1,920
	Accommodation (4 persons, 1 night)	800 Baht/person/night	800 x 4 x 1	3,200
	<b>4.2 Field trips</b>			
	<b>Daily subsistence (6 persons, 2 days)</b>			
	- Lecturer 3 persons	270 Baht/person/day	270 x 3 x 2	1,620
	- Staff 3 persons	240 Baht/person/day	240 x 3 x 2	1,440
	<b>Accommodation (6 persons, 1 night)</b>			
	- Lecturer 3 persons	Baht/person/night	1,200 x 3 x 1	3,600
	- Staff 3 persons	800 Baht/person/night	800 x 3 x 1	2,400
5	<b>Refreshment Breaks</b>			
	2 times/day, 30 persons	60 Baht/person/time	60 x 30 x 23	41,400
6	<b>Reception</b>			
	Welcoming Dinner (40 persons)	800 Baht/person	800 x 40	32,000
7	<b>Opening/Closing ceremony</b>			
	Site preparation/arrangement	1,000 Baht/time	1,000 x 2	2,000
8	<b>Transportation</b>			
	<b>8.1 Pre-survey</b>			
	Van rent (1 van, 2 day)	3,500 Baht/day	3,500 x 2	7,000
	Taxi	250 Baht/person/time	250 x 4 x 2	2,000
	<b>8.2 In-class lecturers</b>			
	Van rent (1 van, 8 days)	2,500 Baht/day	2,500 x 8	20,000
	<b>8.3 Field trips</b>			
	Bus rent (1 bus, 2 days)	15,000 Baht/day	15,000 x 2	30,000
	Taxi	250 Baht/person/time	250 x 6 x 2	3,000
	<b>8.4 Excursion &amp; Social Event</b>			
	Van rent (3 vans, 4 days)	3,500 Baht/day/Van	3,500 x 4 x 3	42,000

No.	Item	Rate	Calculation	Total (Baht)
<b>9</b>	<b>Training materials and equipment</b>			
	Course notes (14 Topics)	2,000 Baht/topic	2,000 x 14	28,000
	Books and manuals	1,000 Baht/person	1,000 x 20	20,000
	Course equipment, tool	1,000 Baht/person	1,000 x 20	20,000
<b>10</b>	<b>Course bag</b>	300 Baht/piece	300 x 20	6,000
<b>11</b>	<b>Pen and Notebook</b>	10+30 Baht/piece	40 x 20	800
<b>12</b>	<b>Miscellaneous</b>			54,820
	<b>Entry fees during social cultural</b>			
	<b>Internet hours</b>			
	<b>Infrastructure &amp; Maintenance</b>			
	<b>Communications (computer, phone, fax, courier)</b>			
	<b>Souvenir for the field trips</b>			
	<b>Photocopies</b>			
	<b>ID Neck strap</b>			
	<b>Name tags</b>			
	<b>Certificates</b>			
	<b>Others (Fresh drive + ink + scan cover + paper)</b>			
	<b>Sub Total</b>			<u>463,800</u>
<b>13</b>	<b>Overheads (14% of total operation cost)</b>			64,932
	<b>Total</b>			<u><b>528,732</b></u>

**Remark: Miscellaneous details:**

Entry fees during social cultural	5,820 Baht 1) Grand Palace and Rattanakosin Exhibition Hall - Thai 70 baht x 4 person (including staff) = 280 baht - Foreigner 100 baht x 18 person = 1,800 baht - Local guide = 1,000 baht 2) Wat Pho - Foreigner 100 baht x 18 person = 1,800 baht 3) Wat Mahathat, Phra Nakhon Si Ayutthaya province - Thai 10 baht x 4 person (including staff) = 40 baht - Foreigner 50 baht x 18 person = 900 baht
Internet hours	18,000 baht (300 baht x 10 days x 6 account)
Infrastructure & Maintenance	10,000 baht
Communications (computer, phone, fax, courier)	5,000 baht
Souvenir for the field trips	4,500 baht (1,500 baht x 3 pieces)
Photocopies	2,400 baht (120 baht x 20 photocopies)
ID Neck strap 20 pieces	2,000 baht (100 baht x 20 pieces)
Name tags	100 baht (5 baht x 20 pieces)
Certificates	2,000 baht (100 baht x 20 pieces)
Fresh drive + ink + scan cover + paper	5,000 baht

**Remark:****In-Class total 15 topics = 45 hrs.****Field lecturers total 28 hrs.** consist of:**Workshop = 8 hrs.** (Campus tour, Country report presentation and Course discussion and overall conclusion)**Field trip = 20 hrs.**1) **Field Trip 1: Two-day field trip = 10 hrs. x 2 days = 20 hrs.**

- The East Coast: Agriculture, Orchard, Aquaculture at Chacheongsao, ChonBuri, and Rayong Provinces

**Hotel for Participants:** Hotel at Salaya.**12. (Draft) Schedule**

<b>Tuesday 8 July, 2025</b>		
<b>Time (hrs.)</b>	<b>Activities</b>	
09:00 – 10:00	Registration	
10:00 – 11:00	<b>Opening ceremony</b> <ul style="list-style-type: none"> <li>☒ Audio Visual Presentation Faculty of Environment and Resource Studies</li> <li>☒ Welcoming speech by Dean of the Faculty of Environment and Resource Studies</li> <li>☒ Course Introduction, Course Syllabus &amp; Programme, Instructors, Assistants, Logistics by Assoc. Prof. Dr. Nathsuda Pumijumnong</li> <li>☒ Introduction to academic and supporting staff</li> <li>☒ Participants introduce themselves</li> <li>☒ Group photo</li> </ul>	
11:00 – 12:00	<b>Salaya campus tour and open house</b>	
12:00 – 13:00	Lunch	
<b>Time (hrs.)</b>	<b>Topic</b>	<b>Instructor</b>
13:00 – 16:00	<b>Topic 1:</b> Overview of the food system	Assoc. Prof. Dr. Nathsuda Pumijumnong, Mahidol University
16:30 – 18:30	<b>Welcoming Dinner</b>	All lecturers and staff
<b>Wednesday 9 July, 2025</b>		
09:00 – 12:00	<b>Topic 2:</b> Feed the World with Thailand's Food Securities Policy: Now and Beyond	Dr. Uthai Chareonwong, Independent Researcher
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 3:</b> Impact of Climate Change on Agriculture and Adaptation Strategies in Thailand:	Assoc. Prof. Dr. Kampanad Bhaktikul Mahidol University

<b>Thursday 10 July, 2025</b>		
09:00 – 12:00	<b>Topic 4:</b> Climate-smart agriculture implementation for agricultural sustainability	Assoc. Prof. Dr. Nathsuda Pumijumnong, Mahidol University
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 5:</b> Mangrove ecosystem as “food basket” for all	Assoc. Prof. Dr. Paramitta Punwong, Mahidol University
<b>Friday 11 July, 2025</b>		
09:00 – 12:00	<b>Topic 6:</b> Managing coastal community networks for food security	Asst. Prof. Dr. Kamalporn Kanongdate Mahidol University
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 7:</b> Community-based participatory to improve food security Policy advocacy and implementation	Dr. Prakasit Kayasith, Thai Health Promotion Foundation
<b>Saturday 12 July, 2025</b>		
<b>Social and cultural activities:</b> <i>Rattanakosin Island - Bangkok</i>		
<b>Sunday 13 July, 2025</b>		
<b>Social and cultural activities:</b> <i>1) Chatuchak Weekend Market and 2) Samyan Mitrtown - Bangkok</i>		
<b>Monday 14 July, 2025</b>		
09:00 – 12:00	<b>Topic 8:</b> Mechanisms for greenhouse gas reduction and adaptation to climate change impacts from the agricultural sector:	Dr. Ammat Chidthaisong:
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 9:</b> Role and management of soil for food security and nutrition	Asst. Prof. Dr. Wanwisa Pansak Mahidol University
<b>15 - 16 July, 2025</b>		
07:00 – 17:00	<b>Field trip 1:</b> Two-day field trip to visit the East Coast: agriculture, Orchard, Aquaculture	<b>MU staffs</b>
<b>Thursday 17 July, 2025</b>		
09:00 – 12:00	<b>Topic 10:</b> Aquaculture-Certification and Eco- Labelling	Dr. Phatra Samerwong Mahidol University
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 11:</b> Agriculture and value chain: Improve food quality and Food value chain	Dr. Uthai Chareonwong, Independent Researcher

<b>Friday 18 July, 2025</b>		
09:00 – 12:00	<b>Topic 12:</b> Postharvest technology and food preservation technology	Kasetsart University
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 13:</b> Food and nutrition ☒ Immune Boosting Foods ☒ Well Mental Eating Foods & Drinks ☒ Immune Balancing Foods (Food for the Future)	Asst. Prof. Dr. Preeyaporn Koedrith Mahidol University
<b>Saturday 19 July, 2025</b>		
<i>Social and Cultural Activities: MBK/ Pratumam/ Platinum Fashion Mall - Bangkok</i>		
<b>Sunday 20 July, 2025</b>		
<i>Social and Cultural Activities: 1) Ayutthaya Elephant Palace &amp; Royal Kraal 2) Wat Mahathat - Phra Nakhon Si Ayutthaya province</i>		
<b>Monday 21 July, 2025</b>		
09:00 – 12:00	<b>Topic 14:</b> Food Waste Management	Asst. Prof. Dr. Achara Ussawarujikulchai, Mahidol University
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Topic 15:</b> Adding Value to Agricultural Waste: A Case Study of Rice Straw and Corn Husks	Ms Jaruwan KhamMuang Fang Thai Factory, Lampang, Thailand
<b>Tuesday 22 July, 2025</b>		
09:00 – 12:00	<b>Country Report Presentation 1</b>	All Lecturers
12:00 – 13:00	<b>Lunch</b>	
13:00 – 16:00	<b>Country Report Presentation 2</b>	All Lecturers
<b>Wednesday 23 July, 2025</b>		
09:30 – 10:30	<b>Course discussion and overall conclusion</b>	All Lecturers
10:30 – 11:30	<b>Closing Ceremony</b> ☒ Report by Course Director, Faculty of Environment and Resource Studies ☒ Speech by the Director of Thailand International Cooperation Agency (TICA) ☒ Certificate presentation and closing speech by the President of Mahidol University ☒ Group photo	All Lecturers and Staff

\* Please note that the schedule is subject to change.