



## **Program Outline**

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**PROFESSIONAL TRAINING PROGRAM**

**ON**

**ADVANCED SHRIMP FARMING**

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**03-10 November 2019**

June 2019

Asian Institute of Technology (AIT)  
Pathum Thani 12120, Thailand



## Professional Training Program on Advanced Shrimp Farming

### 1. Program Background

For last couple of decades Shrimp Farming, considered to be the most dynamic aquaculture venture, has played a leading role in aquaculture development. This is mainly in term of increasing total fisheries production, delivering high quality protein, providing attractive benefits or profits (return on investment) and creating jobs. While Asia produces almost 75% of farmed shrimp, advanced shrimp farming has already been developed in China and few southeast Asian countries, and it is still expected to expand and developed rapidly in many other countries.

However, the venture has never been free from anxieties and most countries including Thailand have learned valuable lessons on dealing with diseases, crop failures from other issues and environmental degradation. Introducing good planning and management practices at the early stages are found to be the key for this venture, where it is found to be sustainable. To avoid serious environmental and shrimp disease problems which have plagued many Asian shrimp producing countries, Environmental Impact Assessment (EIA), Code of Conduct (CoC) and Best Management Practices (BMP) have also been introduced in many countries.

Higher profit potential and production reliability through avoidance of diseases have basically pushed the rapid move from Black Tiger Shrimp (*P. monodon*) farming to White Shrimp (*P. vannamei*) farming in many southeast and south Asian countries. Since its introduction in 2001, Thailand has not only observed a revolution in White Shrimp Farming but also introduced or innovate many new technologies and adapted good management practices. The country is now well known for its better risk management and development of a of a more sustainable farming approach (i.e., Intensive 2.0). While many other countries are interested to step in shrimp farming venture or intensify their farming practices and/or observing a shift from Black Tiger Shrimp to White Shrimp or focus on earlier one (e.g., Bangladesh), there is still not only the lack of know-how but also existing concerns of potential failures. Therefore, the need for introducing planning and management along with basic know-how, risk management and sharing the lessons learned are deemed very much necessary in the region. And again, when higher profitability and production reliability have been increased significantly, the social benefits and environmental protection of this boom must also be secured.

**“Advanced Shrimp Farming”** is a one week long professional training program, which has been designed to address not only the lack of know-how and issues with farming practices but also to meet the specific needs and requirements for the development of this venture in the region. The program will cover the state of the art of farming practices, existing good practices, innovation and advanced technologies in farming and shrimp health care along with planning and management of environmental issues with shrimp farming.

### 2. Program Objective and Learning Outcomes

The delivery of this professional training course will be participants centered encompassing two major aspects: classroom based technical sessions and field/study visits. The classroom based sessions will be comprised of class lectures, case studies, hands-on session and group discussions. Field visits will be a major part of this training course. The field visits will deepen learning from classroom based studies and will provide firsthand experiences for the participants on how the



farming practices are being pursued, what are the issues to deal with and how, and what are the roles of various government departments, farmers and research institutes/organizations.

### 3. Program Content and Delivery

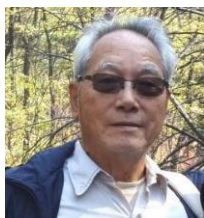
The overall content of this program will cover the following topics:

- Introduction on Shrimp Production in Thailand including experiences and policies related to shrimp/prawn culture development, extension and management
- Pond Preparation including Pond Bottom Dynamics/Soil Management
- Water Quality Management
- Grow-out pond/farm Management
- Shrimp Nutrition and Feed Management
- Shrimp Health Management including Pre/Pro-Biotics in Shrimp Farming
- Innovation (i.e., aquamimicry, bioflocs, high intensity indoor farming) in Shrimp Farming
- Planning and Management for Environmental Issues/Concerns (EIA, CoC, BMP etc.)

The technical sessions will be accompanied with field visit/trips to respective farms or research stations/laboratories of academic institute. The actual duration of the complete training course is 6 Days. The course content will have 3 and half days of technical sessions followed by 2 days of field trip and half day for Way Forward plus Group Action Plan (GAP). The course will be taught by internationally renowned academicians (from AIT and partner institutes/organizations in Thailand), shrimp farming experts, researchers, professional trainers and practitioners.

### 4. Key Resource Persons and Facilitators

#### Prof. Chang Kwei Lin



(Consultant & Former AIT Professor)

**Area of Expertise:** Pond Bottom Dynamics/Soil Management; Aquaculture Development in South and Southeast Asia.

#### Associate Prof. Dr. Chalor Limsuwan



Aquaculture Business Research Center (ABRC)

(Former Kasetsart University Fisheries Faculty Member)

**Area of Expertise:** Dr Chalor is most well-known and practical shrimp farming experts in Thailand. His shrimp BMPs (Better Management Practices) and health management protocols are applicable to most of the world's shrimp farming regions.

#### Dr. Anil Kumar Anal



Associate Professor and the Head of Department of Food, Agriculture and Bioresources (FAB)

School of Environment, Resources and Development

Asian Institute of Technology

**Area of Expertise:** Probiotics in Aquaculture; Agriculture and Pharmaceutics;



Food Safety; Biorefinery; Utilization of Agro-Industrial Waste to High Value Add; Functional Foods; Nanotechnology Applications in Food; Controlled and Targeted Delivery Systems of Bioactive Molecules in Complex Food systems.

**Dr. K.R. Salin**



Associate Professor  
Aquaculture and Aquatic Resources Management (AARM)  
School of Environment, Resources and Development  
Asian Institute of Technology

**Area of Expertise:** Sustainable shrimp farming; Ecosystem-based aquaculture; Applied genetics for improved aquatic stocks; Breeding and hatchery management of aquatic stocks; Climate change adaptation in fisheries and aquaculture.

## 5. Program Duration, Location and Time

This program is proposed to be conducted on **03-10 November 2019** including International travel to/from Thailand. The **tentative program schedule** has been attached to the **next section**.

## 6. Medium of Instruction

The medium of instruction of this program will be English. Where discussions are in Thai, such as during field or organization visits, a local Thai interpreter will be available to assist.

## 7. Tuition Fee, Associated Expenses and Payment

The proposed AIT Total Tuition Fee is USD 1,500 per participant.

The tuition fee will cover all training related costs including Admission and Administration Fee, Academic Services Fee, Fee for Logistics Services and Transportation, Expenses for Program Preparation and Field Trips, and Expenses for Official Functions including Working Lunch.

The tuition fee will **NOT** cover Accommodation, Dinner, major medical treatment and any premium health insurance or travel insurance. Participants must secure their entry visa for Thailand (if required), along with their medical and travel insurance.

While in any part of Thailand, food (e.g., western, Thai, vegetarian and halal food) can be found at the training venue or at any of the suggested accommodation places. During field trips, there will be mostly Thai food including fish, vegetables, chicken and seafood. A special care will be taken for the participants to select vegetarian and halal food vendors wherever required.



**Payment:**

The program fee must be paid directly to Asian Institute of Technology at least two-three weeks before the start of the professional development training program.

a) The payment can be made by bank draft or bank transfer to:

Account Name:	Asian Institute of Technology
Account Number:	468-046301-2
Bank name and address:	SIAM COMMERCIAL BANK PUBLIC CO., LTD. Thammasart University Hospital Branch 95 Moo 8, Khlongnueng, Klongluang Pathumthani 12120 Thailand
Type of A/C:	Current
Swift Code:	SICOTHBK

a) In case of **Bank Draft** the payee name has to be written as “Asian Institute of Technology”.

**7) Inquiry and Contact**

<p><b>1) Dr. Md. Zakir Hossain</b> Director (Programs) AIT Extension Asian Institute of Technology (AIT) P.O. Box 4, Klong Luang, Pathum Thani 12120 THAILAND Tel : +66-8-169 40759 Fax : +66-2-524-6332 Email : <a href="mailto:zakir@ait.ac.th">zakir@ait.ac.th</a></p>	<p><b>2) Dr. Jonathan Shaw</b> Executive Director AIT Extension Asian Institute of Technology (AIT) P.O. Box 4, Klong Luang, Pathum Thani 12120 THAILAND Tel : +66-2-524-5890 Fax : +66-2-524-6332 Email : <a href="mailto:directorextn@ait.ac.th">directorextn@ait.ac.th</a></p>
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### Tentative Program Schedule

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Sunday, 03 Nov 19	Monday, 04 Nov 19	Tuesday, 05 Nov 19	Wednesday, 06 Nov 19	Thursday, 07 Nov 19	Friday, 08 Nov 19	Saturday, 09 Nov 19
<b>09.00 – 12.00</b>  Arrival of Participants and Check in to the AIT Conference Center	<b>08.30 – 09.30</b> Registration <b>09.30 – 10.30</b> Opening Ceremony Group Photograph <b>10.30 – 12.00</b> <ul style="list-style-type: none"> <li>Participant's Introduction</li> <li>Program Orientation</li> <li>Overview on Shrimp Farming Industry in Thailand, Region and the Global</li> </ul>	<b>09.00 – 12.00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>Evolution of Shrimp culture in Thailand</li> <li>Shrimp culture Technic and Farm management</li> <li>Various of Shrimp culture systems in Thailand</li> </ul>	<b>09.00 – 12.00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>Shrimp Nutrition and Feed Management</li> <li>Water Quality Control and Shrimp Health Management</li> </ul>	<b>09.00 – 12.00</b>  <b>Organization Visit on Coastal Aquaculture Research and Development Center</b>	<b>09.00 -12.00</b>  <b>Technical Workshop on Advanced Shrimp Farming/Culture Techniques (in the farm)</b>	<b>09.00 – 12.00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>High-tech and Indoor Shrimp Farming</li> <li>Mycotrophic System for Shrimp Farming</li> </ul>
<b>Morning Sessions (09.00-12.00 hrs./ Tea Break 10.15-10.30 hrs.) Lunch Break (12.00 to 13.00 hrs.) Afternoon Sessions (13.00-16.00 hrs./ Tea Break 14.45-15.00 hrs.)</b>						
<b>13.00 – 16.00</b>	<b>13.00 – 16.00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>Shrimp/Prawn Production in Thailand – development, issues and relevant policies</li> <li>Good Practices with case studies from Thailand, Vietnam and Indonesia</li> </ul>	<b>13:00 – 16:00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>Advance Shrimp Farming systems and Development</li> <li>Research project that leading to success of create new standardize of Shrimp Farming</li> </ul>	<b>13.00 – 16.00</b>  <b>Technical Session</b> <ul style="list-style-type: none"> <li>Shrimp Farming using Biomimicry System</li> <li>Probiotics in Shrimp Farming</li> </ul>	<b>13.00 – 16.00</b>  <b>Field Visit to Shrimp Farming &amp; Coastal Aquaculture in Eastern Coast</b>	<b>13.00 – 16.00</b>  <b>Field Visit to Shrimp Farming &amp; Coastal Aquaculture in Eastern Coast</b>	<b>13.00 – 16.00</b>  Wrap-up, Group Work and Presentation, Discussion on the Key Learning Points (KLP) and Way Forward  <b>Program Closing Certificate awarding</b>

10 November 2019: Participants' Departure