



Training on Business Investment on
**SMART LOGISTICS TECHNOLOGIES
FOR MEKONG AGRICULTURAL
SUPPLY CHAINS**

OCTOBER 10 - 14, 2022
09.00 am – 12.00 am and 13.30 pm – 16.30 pm
(GMT+7) through Online Platform

1. Background

The agricultural sector is the backbone of, and a key contributor to, every country's economy. In the Mekong countries of Cambodia, Lao PDR, Myanmar, Thailand and Vietnam (CLMVT), the agriculture and food industries have been one of the fastest-growing sectors. Over 60% of the population of the Mekong region are engaged in some form of small-scale agriculture. These countries have witnessed an average annual GDP growth of 7.5% GDP since 1992.¹ They have also witnessed annual urbanization growth of 3%. High-value agricultural production, in particular horticultural crops (fruit and vegetables), have played a significant role in the growth of agricultural incomes and the improved social welfare of rural communities.²

The transport of fresh produce from the farm to the table is subject to many obstacles such as slow transit times and high rates of perishability. Food losses and food waste have adverse impacts on the region's food security, while negatively impacting on the environment, labour, land, water and the income of farmers. The highest levels of food loss and waste occur in perishable crops such as fruits and vegetables and roots and tubers. Post-harvest losses in fruits and vegetables across Asia and the Pacific region may be as high as 50 percent, while for rice, they vary between 12 and 37 percent. On the consumer side, food waste is an emerging issue associated with growing incomes and changing food consumption habits in urban centres. These impediments to fresh food reaching urban markets encourages an increased dependence on fast foods and processed foods, elevating the levels of childhood obesity, and chronic diseases such as diabetes, high blood pressure and heart conditions. Farmers and consumers could achieve better outcomes if crop wastage were to be reduced.

Leveraging technology to overcome supply chain issues will be a critical factor in mitigating the impacts of climate change on pastoral communities and ensuring farmers are financially resilient. Logistics and supply chain innovations in the food and agribusiness industry must address these challenges, including problems related to perishable products, unpredictable supply variations

¹ Mekong Eye (2018), Pushing GMS food up the value chain, <https://www.mekongeye.com/2018/01/05/pushing-gms-food-up-the-value-chain/> (Accessed: 31 may, 2021).
² <http://www.fao.org/3/i3657e/i3657e.pdf>

and stringent food safety and sustainability requirements. Unfortunately, the traditional industrial supply chain in the food and agricultural sector is burdened by low resource efficiency, wastage, and a high carbon footprint. There has been little innovation in the agricultural supply chain of Mekong countries. Smart logistics promises a future in which technology can support agri-food supply chains to address these challenges.

Smart logistics and supply chain technology are based on the use of disruptive technologies, referred to as Industry 4.0. Such technologies include artificial intelligence, IoT, and the blockchain to improve the performance of the agricultural supply chain. These technologies utilize advances in technology such as sensors (e.g., temperature and humidity sensors), automation and robotics; drone technology; and GPS technology. The adoption of smart logistics technology in the agri-food sector is expected to reduce the carbon footprint through the use of energy-efficient technologies; improve food safety and quality monitoring; improve food security through increased production and reduced wastage; improve traceability and data transparency; and reduce the cost of financial transactions. Through the use of smart logistics and supply chain technology, it is possible to make the agri-food supply chain greener, starting at the farm gate, through to processing, storage, packaging, transportation, and retail.

2. Training Introduction

In this context, the Mekong Institute (MI) is organizing an online training on “Business Investment on Smart Logistics Technology for Mekong Agricultural Supply Chains”. Training participants will progress through three phases:

- **Online Learning Phase** – consisting of 30 hours of live online learning from October 10 - 14, 2022. During this time, the participants will conceptualize, participate in training sessions and exchange practical insights. At the end, the participants will come up with a Business Plan that they are required to carry out in their respective countries.
- **Business Plan Development and Implementation** – In this phase, the participants will be required to further develop and implement their draft Business Plan in their home countries, backstopped by the technical assistance of MI.
- **Synthesis and Evaluation Workshop:** the participants will be invited to share the outputs of their Business Plan implementation in a synthesis and evaluation workshop, which will be organized online. Participants will present results of learning and practices from their business plan implementation.

3. Training Objectives

- i) To improve / update knowledge by sharing information on smart logistics technologies for the agriculture supply chain in Mekong countries;
- ii) To build capacities of the stakeholders and beneficiaries from the public and the private sectors on various issues related to business investment in logistics technologies for agriculture supply chains, financing, leasing and business plan preparation;
- iii) To provide alternative smart logistics technologies for agriculture supply chains and best practices for agricultural supply chain operations;
- iv) To provide project stakeholders and beneficiaries information about banking and leasing products, services, financing logistics and business operations for agricultural supply chains in five Mekong countries;

- v) To identify the gaps between financial and leasing supply and demand, i.e. financial institutions and leasing companies and logistics operators in Mekong countries.
- vi) To support project stakeholders and beneficiaries on business plan preparation.

4. Training Outcomes

At the end of the online training, the participants should have acquired knowledge and practical skills on a variety of topics. They will have acquired a deeper understanding of smart logistics technologies for the Mekong agricultural supply chain, the benefits of the technologies, and the importance of business plans.

Moreover, this training should achieve the following outcomes for participants:

- Define and recognize the availability and suitability of financial and leasing services;
- Define and recognize the appropriate technical solutions and practices for developing smart logistics technologies suitable for the agriculture supply chain in Mekong countries;
- Learn about and identify the readiness of stakeholders, and their readiness to adopt smart logistics technologies.

5. Duration and Location

The training will be spread over two weeks from October 10 – 14, 2022. The training will be held online, consisting of 6 hours of learning per day.

6. Training Modules

In this online course, participants will explore four interrelated modules as follows:

Module 1: Smart Logistics Technology for Agriculture Supply Chain

Topics

- An overview of the current situation and the challenges to adopting logistics technology as it applies to the agricultural supply chain in the Mekong
- Overview of Smart Logistics Technology for the Agriculture Supply Chain

Module 2: Business Investment on Smart Logistics Technologies for Agriculture Supply Chains

Topics

- A detailed assessment of Smart Logistics Technologies for Agriculture Supply Chains covering:
 - An introduction to the technology
 - Product Specification - Features and Applications
 - Operationalization, customer service and warranty
 - Supplier and Manufacturers
 - Case Study of the Technology
 - Cost – Benefit Analysis
 - Calculating the Return on Investment

Module 3: Financing Leasing for Logistics Technologies in Mekong Countries

Topics

- Document any requirements for Loan Applications to finance logistics technologies
- Key features of Leasing Products and Services
- Loan Procedure and Process

Module 4: Business Plan

Topic

- Business Plan Preparation
- Business Plan in Practice on Logistics Technology for Agriculture Supply Chain
- Key Inputs for the Business Plan
- Group / Individual Work on the Business Plan Template

7. Target Participants and Online Training Package

A total of 30 participants will be selected for the training with a strong focus on Application and Adoption of the Smart Logistics Technologies for the Agricultural Supply Chain, and a willingness to develop business plans for financial institutions. They will include:

- i. Transport and logistics companies,
- ii. Firms active in the logistics sector such as transporters, manufacturers, warehouse owners, cold storage operators, agricultural producers, millers, processors, distributors or potential investors.
- iii. Members of business associations,
- iv. Farmers cooperatives,
- v. Government agencies related to industry, trade, transport, agriculture, logistics and connectivity are also eligible to apply.

Only shortlisted candidates will be contacted for the training recruitment process.

Important criteria for participant selection are proficiency in the English language, the ability to commit themselves to full attendance and to fulfill all the course requirements.

The selected participants will be provided a lumpsum grant to fully participate in all sessions. The grant will cover expenses related to:

- Internet cost
- Refreshment
- Time for offline exercises, assignments and presentation preparation.
- Business Plan preparation, development and implementation.

8. Training Design and Methodology

The training is designed to foster greater understanding of the training contents and to focus on practical knowledge, to respect adult learning principles, use real case studies, adopt participative approaches, as well as stimulate sharing and networking among the participants. The online training will be delivered in English.

All training modules will be drawn from practical experience and tailored to the needs of stakeholders in the logistics sector of the agricultural supply chain. It will incorporate concrete actions for follow-up activities after training. Each training module is designed and delivered using the “Integrated Curriculum” approach. The salient features of this integrated curriculum are that competencies are carefully selected, integration of theoretical concepts with skills practiced, and essential knowledge directed at enhanced performance. The development of implicit skills (such as facilitation, presentation, and communication, negotiation, and leadership skills) are integrated into the course.

For each module, participants will go through three progressive stages of modular training:

Learning Phase



Each training module will start with a participatory training session where trainees are introduced to the concepts, techniques, tools and effective strategies to develop and promote smart logistics technology for the agricultural supply chain. At this formulative stage, learner-centered instruction will be applied where the trainer is the leader of a community of learners, devising ways to promote inquiry, higher order thinking, problem-solving, higher levels of literacy and engagement. This is a conceptualizing stage which requires processing and drawing on a rich knowledge base of content, methods appropriate to the content, and technology appropriate to the content.

Knowledge Application Phase



This competency-based module has been classified as a form of work-based learning. Immediately after the new skills/knowledge have been acquired, the trainees will carry out corresponding assignments. That is to say, after completing deliberation on the concept and tools, participants will be given assignments to identify and design a particular activity in groups.

Knowledge Transfer Phase or Synthesis and Evaluation Workshop

This will be a share-to-learn session where each individual / group will have the chance to present their outputs and share the learning/working experience with others. Lessons learned and practical experiences from the actual applications will be shared and innovative knowledge and skills will emerge and become institutionalized.

9. Training Assignments

Training assignments will require participants to apply the smart logistics technology options for investment decisions in their own country. A Business Plan as a supported business investment document tool will be guided and prepared during the training. The participants are expected to further develop the business plans in consultation with and the support of the MI team after the training has ended. The business plan can be submitted to financial institutions in due course.

10. Resource Persons

The team of resource persons and instructors comprised of international and national experts with knowledge and experience in logistics technology for the agricultural supply chain. They will be responsible for delivering the module sessions alongside the Trade and Investment Facilitation Department (TIF) of the Mekong Institute.

11. Course Materials

Prior to the E-training, all participants and resource persons will receive soft copies of

- 1) The Course Outline,
- 2) Program schedule,
- 3) Directory and
- 4) Presentation on preparations for the E-training to help them understand the objectives and goals of the training

During the virtual training, participants will have access to the Mekong Institute's E-learning in which all documents, including the Resource Person's Presentations and all of the participants' works including video clips will be uploaded and available for downloading or streaming at the following links

- E-learning with password for log in at [www. \(to be provided\)](#)

12. Contracts

For details, please contact the **MKCF's Project Implementing Team**

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13. Tentative Schedule

- Date: October 10 -14, 2022
- Time: 09.00 am – 12.00 am and 13.30 pm – 16.30 pm. (GMT+7)
- Training Platform: Zoom Application

| Date and Time | Session | Topic |
|---|---|--|
| October 10, 2022 | | |
| 09.00 am-12.00 pm | <ul style="list-style-type: none"> ▪ Opening ▪ Training Overview ▪ Presentation and Discussion on Logistics Technology for Agriculture Supply Chain Development <p>By Trade and Investment Facilitation Department, Mekong institute</p> | <ul style="list-style-type: none"> ▪ Overview of the current situation and the challenges of Logistics Technology for the Agricultural Supply Chain in Mekong Countries ▪ Overview of Smart Logistics Technology for Agricultural Supply Chain in Mekong Countries |
| Business Investment Session on a Series of Smart Logistics Technology for Agricultural Supply Chains Development | | |
| 13.30 pm–16.30 pm | <ul style="list-style-type: none"> ▪ Liquid Nitrogen Quick Freezer | <ul style="list-style-type: none"> ▪ Each logistics technology presentation will cover on <ul style="list-style-type: none"> - Technology Introduction - Product Specification - Feature and Application - Operationalization, customer service and warranty - Supplier and Manufacturers - Case Study of the Technology - Cost – Benefit Analysis - Return on Investment and its Calculator ▪ Discussions |
| October 11, 2022 | | |
| 09.00 am-12.00 pm | <ul style="list-style-type: none"> ▪ Smart Reefer Containers | |
| 13.30 pm–16.30 pm | <ul style="list-style-type: none"> ▪ Warehouse Drones | |
| October 12, 2022 | | |
| 09.00 am-12.00 pm | <ul style="list-style-type: none"> ▪ Autonomous Mobile Forklift (AMF) ▪ Autonomous Mobile Robot Base (AMRB) | |
| 13.30 pm–16.30 pm | <ul style="list-style-type: none"> ▪ Multipurpose Autonomous Patrol Robots + Thermal Imaging (Solution) | |
| October 13, 2022 | | |
| 09.00 am-2.00 pm 13.30pm-16.30 pm | <ul style="list-style-type: none"> ▪ Financing Leasing for Logistics Technologies in Mekong Countries <p>By Representatives from Leasing Company and/or Bank in Mekong Countries</p> | <ul style="list-style-type: none"> ▪ Document requirements for Loan Application on Logistics Technology in five Mekong countries ▪ Key features of Leasing Products and Services ▪ Loan Procedure and Process |
| October 14, 2022 | | |
| 09.00 am-2.00 pm 13.30pm-16.30 pm | <ul style="list-style-type: none"> ▪ Business Plan Preparation | <ul style="list-style-type: none"> ▪ Business Plan Preparation ▪ Business Plan in Practice on Logistics Technology for Agriculture Supply Chain |

| Date and Time | Session | Topic |
|---------------|---|---|
| | | <ul style="list-style-type: none"> ▪ Key Inputs for the Business Plan ▪ Group / Individual Work on the Business Plan Template |
| | <p>Note: After the completion of the training, the participants are requested to get additional inputs from the Bank for further business plan development. The technical consultation meeting on business plan development to align with leasing company and/or banks of each Mekong country will be conducted on November 21 - 25, 2022 (3 hrs per day for each of the Mekong countries) to guide the participants on business plan development.</p> | |
| | <ul style="list-style-type: none"> ▪ Closing Session | <ul style="list-style-type: none"> ▪ By Mekong Institute |