



**MEKONG
INSTITUTE**



Implemented by Mekong Institute (MI)

Funded by Mekong – Republic of Korea Cooperation Fund (MKCF)

Curriculum Design Statement (CDS)

3rd Modular Training on Green Freight and Logistics Management in Mekong Countries

April 1 - 5, 2019

Venue: Mekong River Conference Room, Mekong Institute Annex, Khon Kaen,
Thailand

I. Introduction

Freight transportation is critical to businesses, consumers and the world economy. The freight sector moves vast volumes of goods, commodities, materials and food domestically and globally and is primary factor in economy and growth. But a goods movement comes with an impact on the global environment. It contributes a significant portion of air pollution and its contribution is expected to grow significantly in the coming years. Globally, carbon dioxide (CO) emissions from freight transport are growing more quickly than those from passenger vehicles. In particular, heavy duty vehicles are expected to be the largest emitter of CO₂ from all transport modes by 2035.

As the Asian economy continues to grow at a rapid pace, an increase in freight transport activity is also expected. It is estimated that by the year 2050, medium and heavy freight trucks worldwide will consume 1,240 billion litres of fuel, which is estimated at 138% more than 2000 levels. The global share of trucks operating within Asian countries is expected to increase from 19% in 2000 to 34% in 2050.

The Mekong Institute (MI) is implementing a three-year project on “Green Freight and Logistics Development in Mekong countries’ funded by the Republic of Korea through the Mekong – Republic of Korea Cooperation Fund (MKCF). The long-term objective of the project is to reduce the cost of logistics and transport to improve economic performance in the five countries in Cambodia, Lao PDR, Myanmar, Vietnam and Thailand (CLMVT). This will eventually aid the transport sector to increase its contribution to economic development in the Mekong countries as well reduce its carbon footprint.

As part of this project, MI will be organizing a 3rd modular training on Green Freight and Logistics Management in Mekong Countries on April 1-5, 2019 at Mekong Institute (MI), Khon Kaen, Thailand.

2. Training Objectives

1. Discuss tools to help Logistics Service Providers (LSP) to become more competitive and reduce cost of logistics and transport for improvement in economic performance in the Mekong countries;
2. Build capacities of the LSPs on green freight and logistics to comply with the 'green mark' certification;
3. To discuss the potential and benefits of green freight policies;
4. To identify opportunities that can be developed into actions and projects;
5. To form a knowledge base to complement efficient logistics and green freight programs in the countries;
6. To share best practices green freight and logistics to promote learning and exchange among various stakeholders in green freight and logistics;
7. To discuss on green logistic technologies available with suppliers of green freight technologies.
8. Introduce the participants to software on the Green Logistics Auditor (GLA) for the logistics companies to monitor the performance of the set standards;

3. Training Outcomes

At the end of the training, the participants should have acquired knowledge and practical skills on a variety of pertinent topics. They will have a deeper understanding of the significance of "Green" or more generally sustainable practices in the transport and logistics industry. Moreover, this training will aim to have the following outcomes:

- Greater understanding of procedures, formalities, and practices in transport and logistics activities and management in the Mekong countries.
- Develop strategies for transport and logistics planning and management to complement efficient logistics and green freight programs in the Mekong countries.
- Enhanced participants' knowledge on effective implementation of green logistics procedures and logistics management.
- Enhanced capacities of national ministries and logistics associations on green freight standards and certification
- Improved mechanism to share and promote collective action on green freight and logistics development in Mekong region
- Improved information on access to green freight technologies

4. Project Approach

The project approach consists of

Prior to the Modular Training

- A baseline study has been conducted to establish baseline data on keys aspects of logistics and green freight among the logistics service providers (LSP) which will be used to monitor the progress and measure the outcomes of the project.
- Three categories of labels to measure green logistics and freight service standards on core logistics services such as cargo/freight handling, transportation, warehouse,

ICD, cold chains etc. have been decided upon and agreed by GMS - FRETA members, government agencies (e.g ministries of transport) in all the 5 Mekong countries.

- A software program has been developed on the Green Logistics Auditor (GLA) for the logistics companies to monitor the performance of the set standards.
- Country workshops are held in the five Mekong countries to provide training key personnel of departments of land transport and logistics associations on the use and application of the software program.
- Formation of Technical Working Group of the project with the membership of key regional and national stakeholders from CLMVT and the Republic of Korea was established.
- Country workshops to introduce GLA software were organized in the CLMVT countries.
- First and second modular trainings are conducted for national level agencies and logistics service providers involved in logistics development back to back with the adoption of the green logistics auditor software in their respective countries.

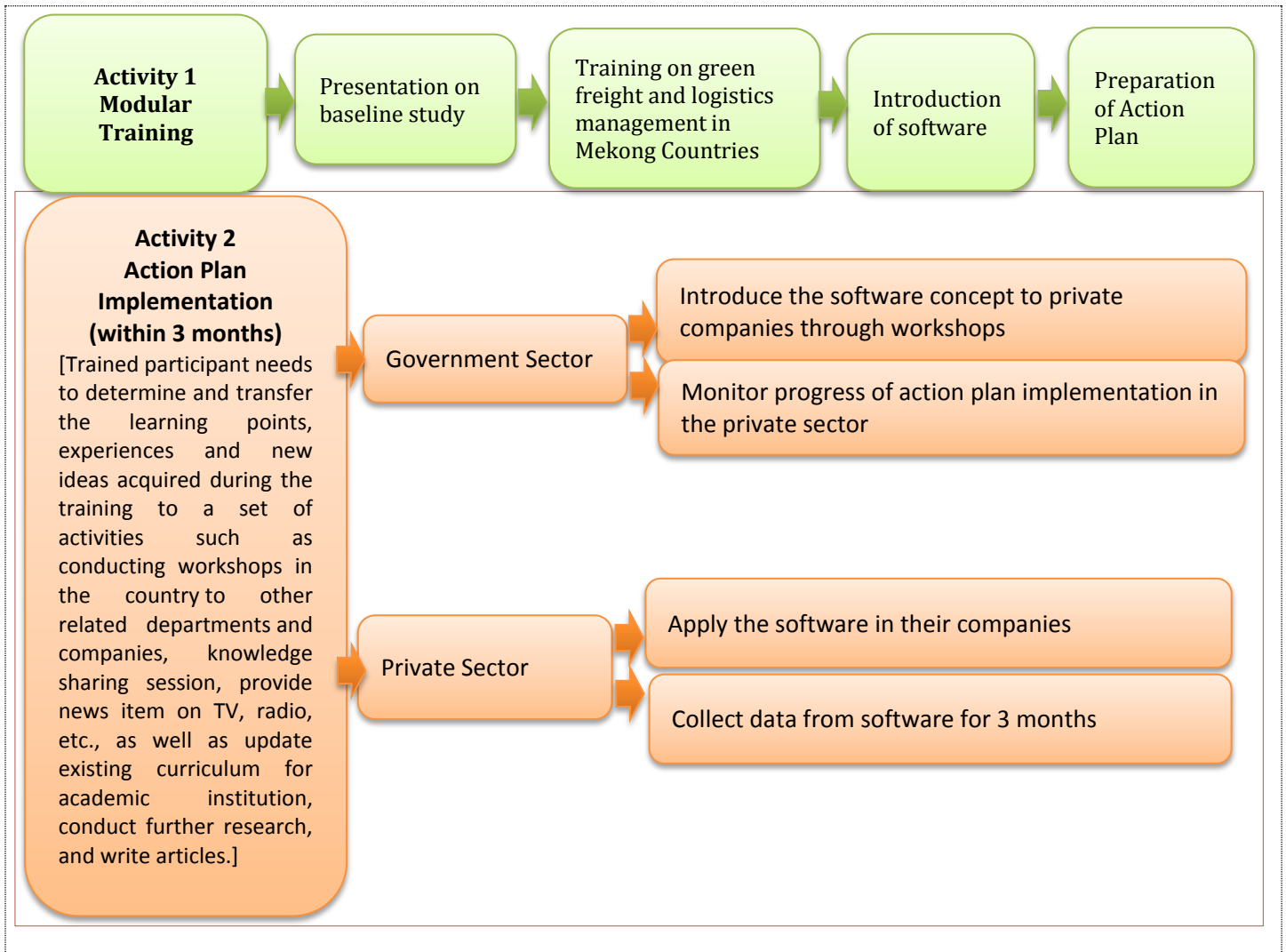
At the Modular Training

- A 3rd modular training is being conducted for national level agencies and logistics service providers involved in logistics development on April 1 – 5, 2019, Mekong Institute, Thailand.

After the Modular Training

- Technical assistance will be provided to implement country wide action plans decided upon by participants themselves at the modular training.

The different activities for the participants of the training are explained in the table below.



5. Target Group

The training targets senior and mid-level officials, academic institutions and members of logistics associations from CLMVT namely;

- Government representatives (including Ministries of Transport, Energy and Environment, Port Authorities),
- Private sector (Logistics Associations, Freight Forwarders Associations, Logistics Operators, Trucking Companies, Shipping Liners etc.)
- Universities and Logistics training institutes.

In general, participants should;

- Have at least 3-5 years of experience in Logistics / Transport sectors from Government, private or academies.
- Have a university degree in a discipline directly related to Logistics/ Transport sectors;
- Be able to communicate (speak, understand, read and write) at professional level in English;

- Have sufficient professional capacity to actively participate cross-culturally at international level;
- Be in good health both physically and mentally;
- Be able to attend the entire course, including its field trips and outdoor activities.

In addition, MI encourages;

- The participation of women and minorities;
- The participation of persons from border areas with other neighboring target countries or those who may otherwise be engaged in cross-border or regional trade and investment.

Important criteria for participant selection are English language proficiency and ability to commit themselves to full attendance, and implementing the action plan after completion of the training within 3 months.

6. Duration and Location

The program comprises of two phases as follows

- Learning phase: One - week modular training program will be held on April 1-5, 2019 at the Mekong Institute's Residential Training Center, Khon Kaen, Thailand
- Knowledge application phase: the trained participants will implement the action plan(s) in his/her country within 3 months after completion of the training. A MI's team will provide technical assistance to implement the activity during April – July, 2019.

7. Training Content

In this course, participants will explore fourteen interrelated modules:

Module 1	Introduction
Module 2	Green Freight and Logistics (why? & how?)
Module 3	Framework-Measurement-Diagnosis
Module 4	Vision-target-KPI
Module 5	Freight Intensity
Module 6	Modal Shift
Module 7	Vehicle Utilisation
Module 8	Fuel Efficiency
Module 9	Decarbonising Fuel
Module 10	Recognition Scheme and Program
Module 11	Greater Mekong Subregion (GMS) Cross Border Transport Agreement (CBTA): Relevance to Green Freight and Logistics
Module 12	Importance of Green Freight Technologies, Their Types, and Solutions
Module 13	Monitoring Company Operational Efficiency through Green Logistics Service Quality Standard (GLSQS) Software Program

Module 1: Introduction

- Overview of UNCTAD Sustainable Freight Transport (SFT) framework,
- The difference among Freight and Logistics, Green Freight and Logistics, and Sustainable Freight Transport and Logistics.
- International variations in green freight priorities.

Module 2: Green Freight and Logistics (why? & how?)

- Logistic costs, the impact of oil price on logistic cost, the role of logistic as key driver of economic growth, wealth creation and jobs and freight transport externalities.
- The international agreement on freight decarbonisation and Greater Mekong Subregion (GMS) Transport Strategic Plan.
- Urban freight/city logistics problems, demand for green logistics
- GMS Sustainable Freight Transport challenges including infrastructure, data, policies, partnership, old trucks, fragmented industry, consumer demand for green product, affordable technologies, etc.

Module 3: Framework-Measurement-Diagnosis

- Environmental Intervention in Logistics System Design & Supply Chain Structure, Choice of Mode, Vehicle Routing and Scheduling, Vehicle Loading, Driving, Vehicle Maintenance, Vehicle Technology, Alternative Fuels.
- Avoid – Shift – Improve (ASI) framework
- Barriers to measuring emissions such as insufficient resource, time or expertise, no demand for emission data, emissions too difficult to calculate, etc.
- Measuring freight externalities
- Freight emission tools and methodologies including quantifying truck GHG emissions to measure the average of fuel efficiency.
- Average Truck Load calculation
- Calculating the external costs of freight transport
- Qualitative assessment and quantitative analysis of freight transport sector

Module 4: Vision-target-KPI

- Sustainable Freight Transport Strategy – Goals and Objectives
- Approaches in setting the targets: Top-down or Bottom-up
- Transport emissions targets: Nationally Determined Contributions, mode share targets, road safety targets, transport renewable energy targets, company and industry level targets.
- Key Performance Indicators (KPI): How to identify good indicators, discussion on urban freight indicators.

Module 5: Freight Intensity

- Freight transport intensity, the indicators and how to measure the intensity, key drivers for freight transport intensity including mode share, average trip length, supply chain structure, and product value density.
- Role of trade in GMS transport intensity
- Freight transport intensity at national level
- Company potential benefit from inventory centralisation
- Importance of urban logistics and spatial planning
- Material efficiency, reducing/reusing packaging and sustainable packaging

Module 6: Modal Shift

- Freight mode share: shipping, air, rail, heavy road, and light road
- Emissions of greenhouse gases from freight transport / logistic
- Modal shift impact and external costs of freight transport
- Factors affecting mode choice: transport costs, speed/time, reliability, and emissions

Module 7: Vehicle Utilisation

- Productivity in freight sector
- Measurement of vehicle utilisation: weight-based measures, freight density, and space-related measures
- Density of freight and vehicle carrying capacity
- Optimising truck size and weight limits
- Constraints on truck utilisation/productivity: regulations, congestion, truck age, just- in-time delivery, nature of packaging/handling equipment, etc.
- How to improve vehicle routing and tracking system

Module 8: Fuel Efficiency

- Fuel efficiency of trucks
- Barriers to energy efficiency in road freight and the benefits of improving fuel efficiency
- Fuel efficiency at fleet level: technology retrofits, aerodynamics, tyre rolling resistance, etc.
- GMS green freight initiatives
- Vehicle purchase decision, maintenance, reduction in vehicle tare (empty) weight, eco-driving, etc.

Module 9: Decarbonising Fuel

- Is decarbonizing fuel important in the GMS region?

- How effective are current GMS government policies in decarbonizing fuel in the freight transport and logistics?
- Which alternative, cleaner energy sources are the most promising for the GMS region and why?

Module 10: Recognition Scheme and Program

- What is a Green Freight Recognition scheme
- GFL Strategy Discussion (Company/City/Corridor/Country)

Module 11: Greater Mekong Subregion (GMS) Cross Border Transport Agreement (CBTA): Relevance to Green Freight and Logistics

- Greater Mekong Subregion (GMS) Cross Border Transport Facilitation (CBTA)
- Paperless for trade facilitation

Module 12: Importance of Green Freight Technologies, Their Types, and Solutions

- Importance of green technologies and solutions
- Types of green technologies and solutions

Module 13: Monitoring Company Operational Efficiency through Green Logistics Auditor (GLA) Software Program

- Introduction to GLA software
- Green assessment and its Key Performance Indicators (KPI)

Module 14: Corporate Social Responsibility (CSR): Relevance to GFL

- Corporate Social Responsibility (CSR)
- The relevance of CSR to Green Freight and Logistics (GFL)

8. Action Plan Guidance and Preparation

As part of the training program, the participants will be required to prepare their action plan(s) to disseminate the knowledge and skills they learned/gained during the training. The orientation for action plans, individual and / or joint action plan preparations and group presentations will be delivered on the last day of the training. The action plan consists of a number of action steps in accordance with the national/local scenario, added with the endowment of clear-cut group work divisions and responsibilities.

9. Training Assignment

Training assignments will require participants to practice professional skills and integrate concepts of transport and logistics management for their own country linking to regional and international level. In addition, participants will work in groups, these activities will

promote communication and promote national level collaboration and foster a professional network of contacts among participants. Specific assignments will also be provided throughout the course.

The team of resource persons / instructors will comprise international and national experts with a significant experience in logistics management in international level. The instructors are all experts in their respective areas of competency which will provide participants with significant opportunities for being exposed to international practice and expertise.

10. Curriculum Design & Methodology

The training design is drawn from capacity building needs and tailored to the regional context. The training is designed to foster greater understanding of the training contents, and to focus on practical knowledge, respect adult learning principles, use real case studies, adopt participative approaches, as well as stimulate sharing and networking among the participants. Interactive experiential learning will be employed here. The training will be delivered in English and will adopt the following methods.

- Lectures and presentations
- Plenary discussions, case studies and group exercises
- Role plays and software demonstration.

As required, all training modules are to be drawn from practical experiences and tailored to the needs of stakeholders involved in transport and logistics activities. It would 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 practice and essential knowledge directed at enhanced performance, and above all, various implicit competencies (e.g. facilitation, presentation, and communication, negotiation, and leadership skills) are integrated across the curriculum.

For each module, participants will go through three progressive stages of a modular training approach as follows:

Learn to Do: Each training module will start with the participatory training sessions where concerned trainees are trained on the concepts, techniques, tools and effective strategies to develop and promote transport and logistics trade and management. At this cognitive stage, learner-centered instruction applied where the trainer is a 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.

Do to Learn: 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 then carry out their corresponding assignments, e.g. after completing

deliberation on the concept and tools for “Green freight planning and management”, participants will be given assignments to identify, design a particular activity in groups.

This application or “doing” (psychomotor) enables the learner to apply the ideas and concepts expressed in cognitive objectives. This stage will be carried out using case studies and simulation exercises.

Share to Learn: Before progressing to another learning module, there will be a share-to-learn session where each individual/group will have a 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.

11. Monitoring and Evaluation (M&E)

An effective monitoring and evaluation mechanism will be put in place to assess the progress and measure the results of the intervention. The M&E will be introduced in the pre, during and post stages of each modular training approach.

12. Contacts

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