











### Background



Trade Policy and Strategy Office (TPSO) under the Ministry of Commerce of Thailand has been continuously organizing the CLMVT Forum since 2016 up to the present.

The forum serves as a platform for exchanging information and knowledge in the domain of economics and trade, business development, and also acts as a networking ground for various stakeholders within the CLMVT countries (Cambodia, Lao PDR, Myanmar, Vietnam, and Thailand). The initiative aims to prepare these countries for the evolving global trade ecosystem, enabling them to securely, and sustainably and comprehensively grow as part of the global supply chain.



These days, various nations are placing significant emphasis on addressing the issues of global warming and climate change.

Consequently, the governments of these countries have introduced laws and measures to regulate and encourage the private sector to improve their production processes for goods and services. This includes the supply chains and logistics systems, with the aim of making them more environmentally friendly.



As the CLMVT countries are a crucial production base and an integral part of global supply chains, it is of utmost importance that both the public and private sectors in the CLMVT region collaborate to discuss strategies for adapting and elevating the countries' production capacities to align with international environmental regulations and standards. This includes aligning with the policies, laws, and standards of major trading partners such as the Green New Deal in the United States, the European Green Deal, and the Carbon Border Adjustment Mechanism (CBAM) of the European Union, as well as Japan's Green Growth Strategy. This is in addition to addressing the behavior of a new generation of consumers who are increasingly focused on environmental sustainability.











### **Objectives**

- To study the regulations and environmental standards among key international countries and the policy directions, laws, and environmental standards of the CLMVT countries and their major partners, including the European Union, the United States, and Japan.
- To examine the supply chains of key CLMVT products and identify three potential products: food, automobiles, and rubber and rubber products, with the aim of developing environmentally friendly supply chains.
- To conduct an in-depth study of the costs associated with improving the supply chains of the three

  3 aforementioned potential products to comply with the international regulations, environmental standards, and policy directions, laws, and environmental standards of major partner countries.
- To conduct an in-depth study of the costs associated with improving the supply chains of the three aforementioned potential products to comply with the international regulations, environmental standards, and policy directions, laws, and environmental standards of major partner countries.
- To promote the development of environmentally friendly supply chains for CLMVT products, and the management of environmentally friendly supply chains and related logistics systems in the CLMVT region.

## **Target Group**

Personnel from the government sector, private sector, academia, and civil society involved with environmentally friendly supply chains in the CLMVT countries (Cambodia, Lao PDR, Myanmar, Vietnam, and Thailand).

## Scope of Work



(1)
Conducting a literature review or reviewing related studies.



(2)
Identifying three potential CLMVT
products for the development of
environmentally friendly supply chains,
and conducting an in-depth study



Collecting data through in-depth interviews, surveys, and gathering domestic data from operators and stakeholders related to the three selected potential products.



Organizing academic seminars and workshop to gather insights and create a network of relevant stakeholders.



Preparing a study report that encompasses the results of analyses and policy recommendations



(6)
Publicizing, creating awareness, and stimulating participation from various sectors.











# Results of the Selection of Potential Products and Key Partner Countries

### Criteria for Selecting Potential Products and Key Partner Countries

This project has undertaken the selection of 3 potential products or industries and 3 key partner countries or groups of countries from CLMVT for study. The selection criteria was based on 3 key factors:











#### **Economic Factors**

- 1. Contribution to GDP
- 2. Contribution to employment
- 3. The number of small and medium enterprises (SMEs) and total enterprises
- 4. The level of integration in the global value chain (GVC)

### om Thailand

 The volume and value of exports from Thailand and CLMVT countries to target partner countries

**International Trade Factors** 

2. The export value of Thailand as a percentage of total export value of CLMVT countries

# International Environmental Regulation and Standards Factors

The importance and potential impacts of international environmental regulations and standards



### Results of the Analysis on Economic and International Trade Factors



**Food Products** 



**Automotive Products** 



Rubber and Rubber Products

### Results of the Analysis on International Environmental Regulations and Standards



The European Union



**The United States** 



Japan

3 potential products and 3 key trading partners for the CLMVT have been identified for further study within this project. The selected potential products are Food, Automotive, and Rubber and Rubber Products, while the key trading partners are the European Union, the United States of America, and Japan.







## International Environmental Regulations and Standards

## The European Union



#### The European Union

is a significant player in the international policymaking landscape, particularly concerning the global challenge of climate change.



The EU has articulated ambitious goals to reduce carbon dioxide emissions by 55% by the year 2030, as outlined in the European Green Deal, and to achieve carbon neutrality by 2050.



To align with these objectives, the European Union has instituted the Carbon Border Adjustment Mechanism (CBAM) and corresponding CBAM taxation.

- These measures ensure that imported products into the EU bear the costs incurred from carbon dioxide emissions generated during their production process.
- The CBAM has ramifications for controlling carbon dioxide emissions across the value chain of various industries, from upstream to downstream activities.



### The United States



#### The United States

is actively working on establishing standards and regulations aimed at fostering environmental sustainability, as embodied in the Green New Deal policy framework.



The major objectives of these regulations are primarily aimed at safeguarding public health, air quality, and the overall environmental well-being of the country.



## Japan



#### Japan

is another significant player in the international fight against climate change, implementing policies aimed at environmentally sustainable growth.

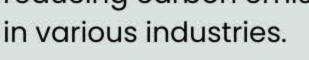


Additionally, Japan has set a goal for 2035, stipulating that all new cars sold in the market should be electric vehicles (EVs).



For example, Japan has put forth the "Japan's Sustainable Food Systems Strategy (MeaDRI)," which aims to build a more sustainable

and environmentally friendly food system. This strategy encompasses multiple goals such as reducing carbon emissions













# CLMVT Forum 2023: Reshaping Supply Chains for Sustainability & Carbon Reduction

The project organized an academic seminar called

'CLMVT Forum 2023: Reshaping Supply Chains for Sustainability & Carbon Reduction'

On 4th September 2023, at the Grand Richmond Hotel. The event had 294 participants, with 112 attending onsite and 182 participating online.



The opening remarks were given by Mr. Wichanun Niwatjinda, Deputy Director General of Trade Policy and Strategy Office, the Ministry of Commerce.

A panel discussion titled "International Environmental Regulations and Standards and the Environmental Standards of the CLMVT and key partners" was conducted. The panelists included:



from Kasetsart University



Asst. Prof. Dr. Mana Luksamee-Arunothai Asst. Prof. Dr. Duongsamorn Manowan from Mahidol University



Asst. Prof. Dr. Veena Anusornsena from the Thai Chamber of Commerce University.

### **Morning Session**

Panel Discussion: "Green Supply Chain Management: Trends and Future Changes" featuring



Mr. Techa Boonyachai Chairman of the Thai National Shippers' Council



**Dr. Nuwong Chonlakup** 

Head of Renewable Energy and Energy Efficiency Research Team at The National Energy Technology Center (ENTEC) under the National Science and Technology Development Agency (NSTDA), and a committee member of Electric Vehicle Association of Thailand



**Dr. Anurug Ruangrob** President of the Thai Sustainable Agriculture Trade Association (TSATA)



Mr. Supadetch Ongsakul Deputy Secretary General, the Thai Rubber Association

#### **Afternoon Session**

The workshop titled "Tomorrow's Opportunities - Carbon-Reduced Supply Chains" was organized.

The information exchange was carried out in both offline and online formats. The workshop was divided into 3 separate rooms, namely, Food Products, Automotive Products, and Rubber and Rubber Products with 204 participants (103 attending onsite and 101 participating online). This was aimed to gather opinions and exchange information on cooperation directions among the CLMVT countries. The lead discussants included:



**Dr. Anurug Ruangrob** President of the Thai Sustainable Agriculture Trade Association

(TSATA)



Mr. Soranun Choochut CEO of ETRAN (Thailand) Co., Ltd.



Mr. Phubet Senbut **Budgeting Analyst of** The National Assembly of Thailand



Mr. Chaiyuth Thirangoon CEO of Siam Timber and Machinery Co., Ltd.

#### **Food Products**



#### **Automotive Products**



### **Rubber and Rubber Products**







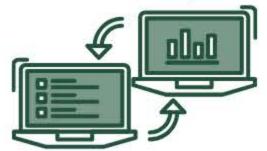






# Overall Strategies for cooperation towards the development of CLMVT's environmentally friendly supply chains are:

- Harmonize CLMVT
  environmental regulations
  with international standards
  and establish clear joint targets.
- Promote information exchange, establish databases, and central platforms for various sectors within CLMVT to benefit from and stimulate a circular economy.
- Establish agreements between CLMVT countries and partners on information exchange, technical assistance, and capital to transition CLMVT's supply chains to be environmentally friendly.



- Develop policy tools to enhance the region's ability to integrate carbon dioxide reduction efforts, such as carbon pricing mechanisms.
- Promote CLMVT as the regional base for green production by ensuring businesses or farmers understand and prioritize developing environmentally friendly supply chains.
- Facilitate the transportation of raw materials for production within the CLMVT countries to support the development of environmentally friendly supply chains collectively.



 Strengthen the collective growth power in the CLMVT region to promote cross-border trade that is environmentally friendly.



- Organize activities to promote intra-CLMVT trade, such as business matching, to establish networks between CLMVT and expand export opportunities throughout the supply chains.

# Overall Strategies for environmentally friendly supply chains management and related logistics systems for high-potential products:

- Implement measures to help businesses reduce costs and introduce tax incentives to encourage businesses to transition to eco-friendly practices.
- Promote internationally recognized standards and responsible business principles.
- Entrepreneurs should plan business operations with environmental factors in mind from the beginning to the end, such as designing sustainable raw materials and factory construction.
- Support businesses in integrating technology to enhance eco-friendly supply chains.



 Foster awareness in managing eco-friendly supply chains and related logistics systems among all employees by setting it as a KPI.



- Support infrastructure that encourages the use of alternative energy and environmentally friendly production, such as EV manufacturing, electric charging stations, solar energy utilization, and comprehensive electric rail transportation systems.
- Encourage Green Financing or tax reductions for businesses practicing environmentally friendly operations.



- Develop special economic zones for trade and measures to facilitate foreign investments, especially in businesses that are environmentally friendly and manage eco-friendly supply chains and logistics systems for potential products.
- Promote research and development of technologies for designing future environmentallyfriendly products, such as waste-tovalue processes and methods to produce new and more efficient forms for carbon reduction.
- Raise consumer awareness and stimulate consumer behavior towards choosing environmentally-friendly products.











# Food Products



# Strategies for cooperation towards the development of CLMVT's environmentally friendly supply chain

- Promote information exchange and establish databases to benefit various sectors within CLMVT, and create checklists enabling businesses to evaluate their carbon emissions.
- Establish agreements between CLMVT countries and partners for data exchanges, technical support, and capital investment to transition the food product supply chain in CLMVT to be environmentally friendly.
- CLMV governments should consider jointly providing green financing incentives for business changes that reduce greenhouse gas emissions, such as offering low-interest rates for carbon footprint assessments, purchasing solar panels, electric vehicles, and shifting towards eco-friendly packaging.
- CLMVT governments should collaborate to provide tax benefits for businesses that transition to an eco-friendly supply chain.
- CLMVT governments should jointly develop policy instruments to promote regional capabilities for integrated carbon dioxide reduction, such as carbon pricing mechanisms.
- Promote CLMVT as a production base for green products in the region, with Thailand and Vietnam leading in eco-friendly supply chain management and serving as role models for other CLMVT countries.
- Facilitate the movement of raw materials for production within the CLMVT group to support joint development of an eco-friendly supply chain for products in CLMVT.
- Governments within CLMVT should jointly organize activities to promote intra-CLMVT trade and exports, such as business matchmaking, to foster networking within CLMVT and expand export opportunities.



# Strategies for environmentally friendly supply chain management and related logistics systems

- The public and private sectors should enhance the production of environmentally-friendly raw materials.
- The public and private sectors should elevate the value-added of food products in the CLMVT region to expand export market value.
- The public and private sectors should expedite the development for the CLMVT group to adopt environmentally-friendly supply chains using green technology, such as Artificial Intelligence (AI) Technology, drone censoring, and the use of clean energy as well as improving the logistics distribution system for agricultural and food products to efficiently reduce food waste.
- The public and private sectors should promote research and development of technologies for future environmentally-friendly production improvements.
- Businesses should adapt their food product supply chains to be more environmentally conscious. In the short term, they should adjust to green procurement practices, distribute products to the market, and implement measures to reduce waste while utilizing reverse logistics. For the medium and long term, considerations might include refining processes and expanding recycling.







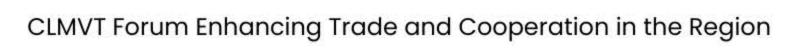












# Automotive Products



# Strategies for cooperation towards the development of CLMVT's environmentally friendly supply chain

- Governments should propel CLMVT to be a base for manufacturing electric vehicles and parts, establishing confidence between countries in jointly developing eco-friendly supply chains within the CLMVT group.
- Knowledge exchange within CLMVT on designing electric and smart transportation vehicles should be encouraged, enabling the production of eco-friendly vehicles in line with partner needs.
- CLMVT should collectively strengthen alliances in developing research and the production of electric vehicles with countries like China, South Korea, Japan, and international organizations.
- CLMVT should collaborate on harmonizing their legal regulations, considering reduced greenhouse gas emissions, should align with partner countries' legal standards such as introducing stricter vehicle emission control standards, regulations on carbon footprint labeling, or reporting carbon dioxide emissions from EV battery production.
- CLMVT Governments should collaboratively offer financial support for green business transitions, including low-interest rates for purchases of solar cells and electric vehicles and others, particularly targeting and motivating medium and small businesses to shift towards environmentally friendly and sustainable practices.
- Establish agreements between CLMVT and partners to exchange information, technical assistance, and capital to modify supply chains within CLMVT to be environmentally friendly.
- CLMVT governments should jointly develop policy instruments to encourage regional capacities in integrating carbon dioxide reduction, such as carbon pricing mechanisms
- Facilitate the movement of raw materials within CLMVT countries to support joint development of an environmentally friendly supply chain for products in CLMVT.
- CLMVT governments should collaboratively organize activities to promote intra-regional trade and exports such as business matching, to foster networking within CLMVT and enhance export opportunities.
- Government support in CLMVT should offer interest rate reductions or discounts on electric vehicle purchases, making them more accessible and reasonably priced for consumers.
- CLMVT governments should provide support for infrastructure and encourage the use of alternative energy and environmentally friendly production such the production of electric vehicles, charging stations, solar energy utilization



# Strategies for environmentally friendly supply chain management and related logistics systems

- Automotive businesses should transition to using environmentally-friendly raw
  materials in vehicle and part production. This should be coupled with government
  policies aiming to increase the proportion of electric vehicle production in the country
  and to position the nation as a hub for electric vehicle manufacturing. Such initiatives
  would significantly motivate smaller businesses to invest and develop further, allowing
  them to be more involved in the electric vehicle supply chain.
- The public and private sectors should accelerate the development of experts in ecofriendly automotive products through training on green technologies with partner countries.
- The private sector should collaborate to allocate resources more efficiently, such as using AI technology for end-to-end supply chain management and adopting a 'build run' approach for single, large-vehicle parts shipments.
- The private sector should strengthen partnerships in the research and development of electric vehicles production, drawing on the expertise from countries such as China, South Korea, and Japan.
- Within the CLMVT group, there is an urgent need to adjust the supply chain to accommodate the increasing production of electric vehicles anticipated by 2035.
- Businesses should integrate environmental costs into their initial business planning models to operate efficiently.
- Enterprises should start with minor steps or initial stages in adjusting the supply chain to be environmentally friendly to ensure the efficiency of these improvements.
- Business operators should improve the automotive product supply chain to be environmentally friendly based on the following activities: 1) Green procurement,
   2) Green production, 3) Product distribution to the market, 4) Reverse logistics, and
   5) Recycling.













# Rubber and Rubber Products



Strategies for cooperation towards the development of CLMVT's environmentally friendly supply chain

- Governments in CLMVT should accelerate knowledge development for rubber and rubber product entrepreneurs about norms, standards, and environmentally friendly supply chain management process to support the expansion of the ecofriendly rubber market.
- Governments in CLMVT should promptly adjust environmentally friendly supply chains to comply with the laws and standards of trading partner countries concerning greenhouse gas reduction and should provide knowledge about various standards such as forest conservation according to the Forest Stewardship Council (FSC).
- Governments in CLMVT should provide financial support for business modifications that reduce greenhouse gas emissions, such as environmentally friendly rubber planting and processing, and support Green Financing.
- Establish agreements between the CLMVT and partners for the exchange of information, technical assistance, and capital to modify the supply chains of products in CLMVT to be environmentally friendly.
- Governments in CLMVT should jointly develop policy instruments to promote regional capabilities in integrating carbon dioxide reduction, such as carbon pricing mechanisms.
- Governments in CLMVT should collaborate to organize activities promoting international trade within CLMVT and export promotion, such as business matching, to create a network among CLMVT and expand export opportunities.



Strategies for environmentally friendly supply chain management and related logistics systems

- The public and private sectors should accelerate the development of ecofriendly supply chains to meet the increasing market demand for environmentally-friendly products.
- Businesses should adjust the supply chain to be environmentally friendly by utilizing green technologies. For example, materials should be recyclable, utilize clean energy production technology such as solar panels, electric vehicles, emission control technology, and must be traceable.
- The public and private sectors should rapidly develop diverse rubber processing technologies to accommodate increasing demands, such as sheet rubber and more efficient rubberwood drying methods that utilize clean energy.
- Regarding the export of rubber products, especially to the European Union, businesses should demonstrate that their products are not associated with deforestation. Products that are allowed for sale or export must undergo a due diligence process of verification and assessment before being imported. Therefore, rubber products intended for export should meet international standards, such as those of the Forest Stewardship Council (FSC). The incorporation of traceability technology is also recommended to enhance the competitive edge of businesses.

















