

Regional Light Electric Vehicle (LEV) Guideline in Southeast Asia

Global E2&3W Conference
Bangkok, 9-12 October 2023

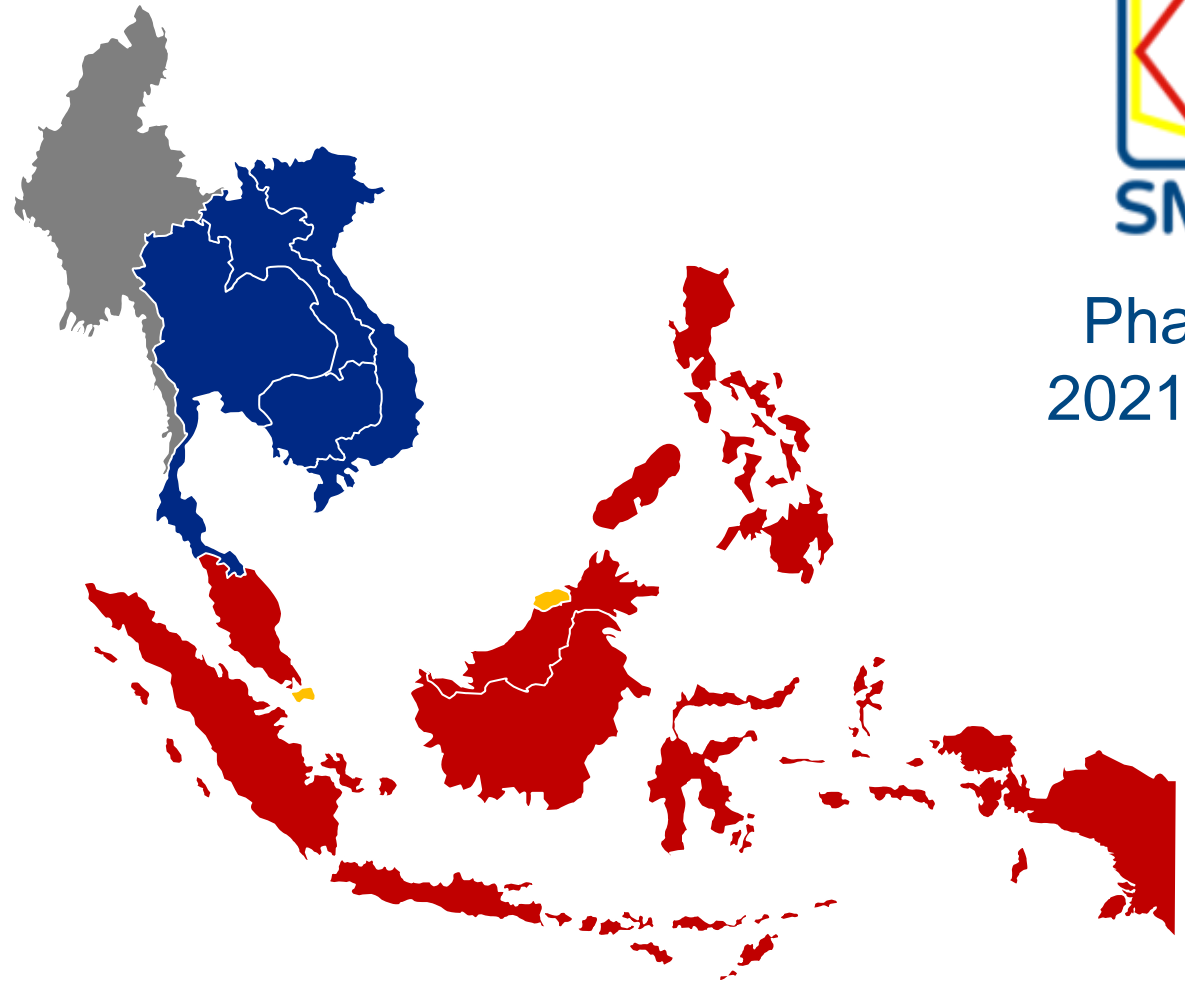


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Sustainable Mobility in Metropolitan Regions in ASEAN



Phase II
2021-2024



An ASEAN-German Cooperation Project



With contribution from SOLUTIONSplus project for the ASEAN LEV Guidelines



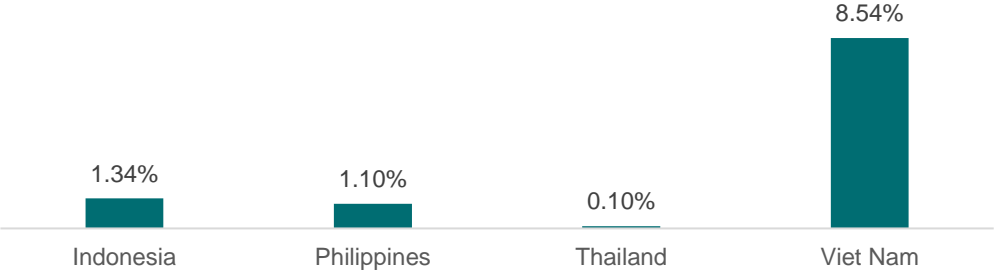
Light vehicles are growing in Southeast Asia - at least 250 million



Southeast Asian Countries with highest number of light vehicle* registration:
Indonesia 120 mil.
Viet Nam 72 mil.
Thailand 22 mil.

**Available data only for two- and three-wheelers
Data source: Asian Transport Outlook*

Share of Light electric vehicles are still comparatively low



E2W market share in several Southeast Asian Countries in 2020
Data source: ICCT (2022)



Image source: Media Indonesia (2022)

Defining the Light Electric Vehicle



**Micromobility
Vehicles**



Electric Two-Wheelers



Electric Three-Wheelers



**Electric Light
Four-Wheelers**

UNECE's Light Vehicle Classification (L1-L7)

Broader classification of LEV

LEV Working Definition

LEV use cases and services to tackle urban problems



Phasing out personal ICE light vehicles



Increasing public transport accessibility



Providing freight services and last-mile delivery



Accommodating the needs of low-emission paratransit options



Advancing the shared vehicle system



Introducing new business models to support the ecosystem



Image source: DHL Group (2021)

Southeast Asian countries are aiming for significant shift towards LEV

2025

IDN 2 million E-Motorcycles, 1,8 million E2W production capacity

LAO 1% of vehicle sales to be electric

THA 53.000 e-motorcycles

2035

BRN 60% annual vehicle sales are electric

IDN 4,5 million E-Motorcycles

2050

KHM 70% of two-wheelers to be electric

2030

IDN 3,1 million E-Motorcycles, 2,5 million E2W production capacity, 7.146 charging stations

LAO 30% of vehicle sales to be electric

MYS 125.000 charging stations

PHL 2.000 charging stations

THA 750.000 e-motorcycles 675.000 e-motorcycles production, 12.000 charging infrastructure, 1.450 battery swap station

2040

MYS ICE phase-out

PHL 922.000 E2W and 233.000 E3W (clean energy scenario)

SGP ICE phase-out

Current LEV Targets in Southeast Asian Countries (work in progress)

Data source: compiled from publicly available papers, reports, and governmental documents

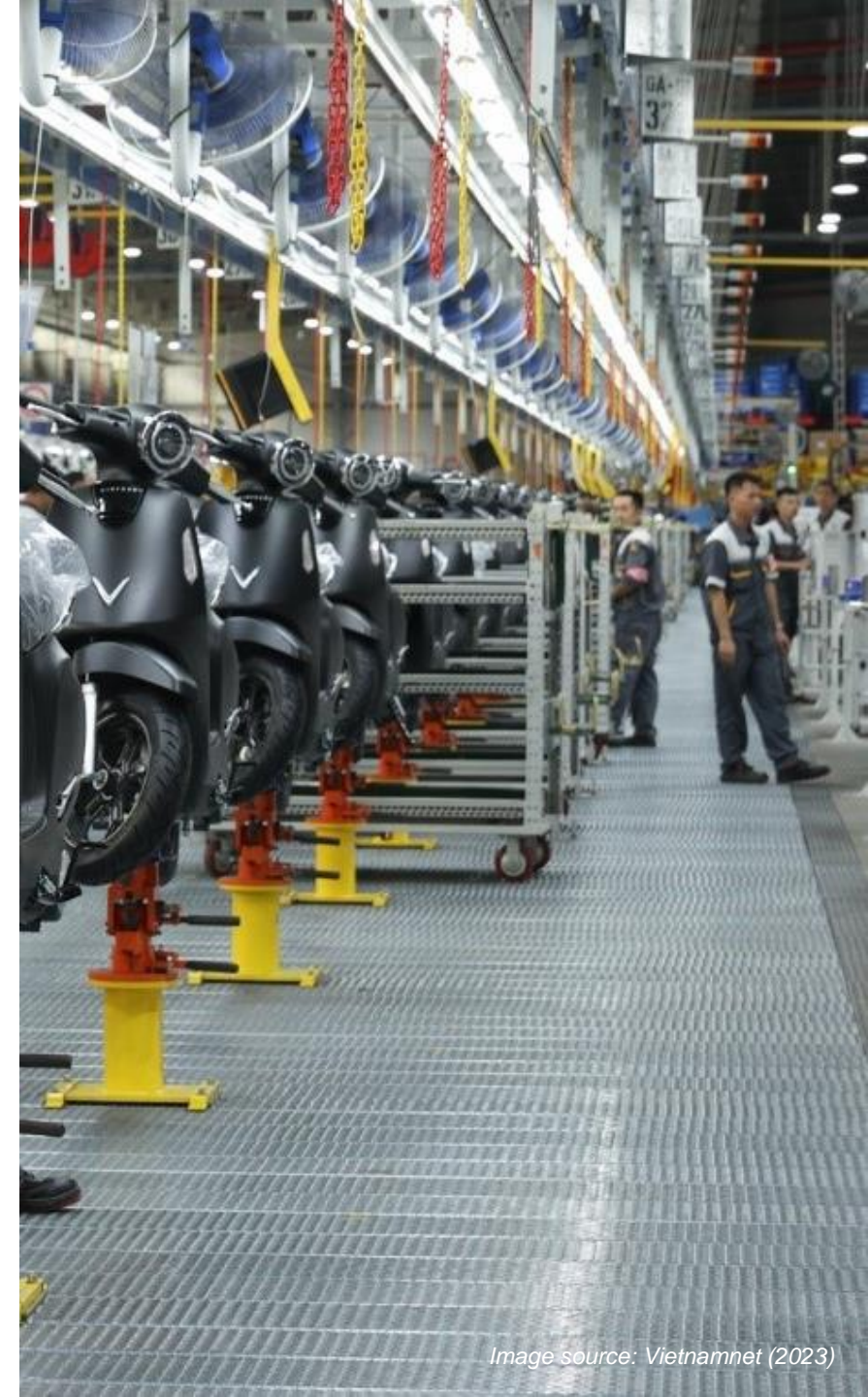


Image source: Vietnamnet (2023)

Current policies and regulations have been established.

Policies	BRN	KHM	IDN	LAO	MYS	MMR	PHL	SGP	THA	VNM
Tax exemptions or reductions for consumers		●	●	●	●		●		●	
Registration fee reduction							●	●		●
Direct subsidy for consumers							●		●	
Lowered parking tariffs for LEV			●							
Electricity discount for houses with registered LEV			●							
Free/ discount for home charging installation									●	
Dedicated parking slots for LEV							●			
Exemptions for odd/even license plate restrictions			●							
Tax exemptions or reductions for producers			●		●		●		●	●
Import tariff exemptions or reductions for producers		●	●		●		●	●	●	
Foreign investment restrictions waiver			●							
Lease of factory space for assembly plants						●				
Finance support for public charging stations			●							
Work visa grant for LEV-related industries									●	

Summary of Current Policies in Southeast Asian Countries *(work in progress)*

Data source: compiled from publicly available papers, reports, and governmental documents



Image source: The Jakarta Post (2020)

Why LEV Guideline on regional level?

Objective

Providing **reference document** to **develop standards and policies for LEVs** in Southeast Asia region.

This guideline aims to evidence:

- the **potential of LEV** to maintain and enhance mobility of people and goods
- the contribution of LEV to the in **decarbonisation of AMS' transport sector**
- **recommendations on how to promote the use of LEV** in the regions.

Guideline Content

1. Current LEV Condition in ASEAN Member States: Barriers and Opportunities
2. Case Studies of LEV: Good Practice and Lesson Learnt
3. Action Guidelines Development
4. Recommendation

Data Collection Methods



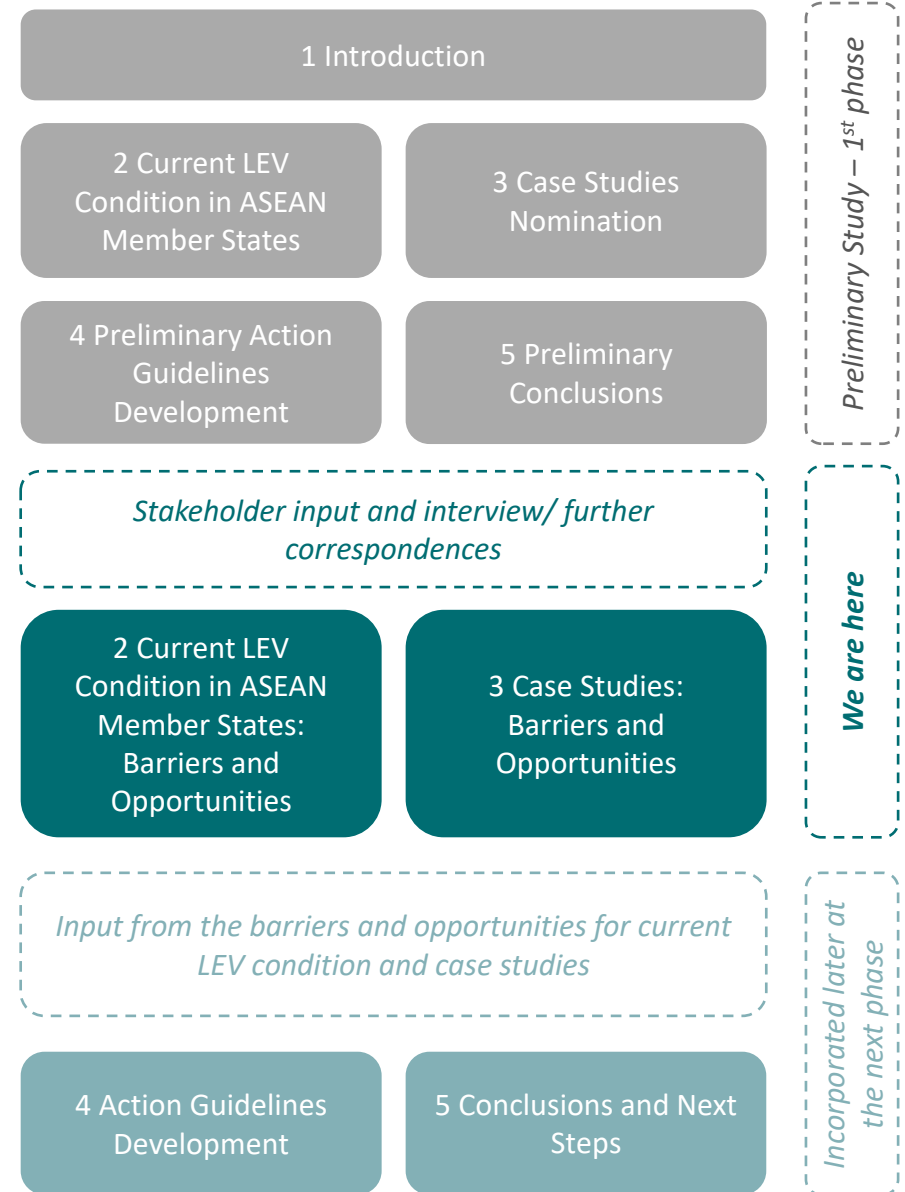
Literature Review



Stakeholder Interview



Country Factsheet
Contribution



Tentative structure of the document

Preliminary Measures Recommendation



Incorporate LEV Specific Targets and Policies in National Strategies



Develop and Harmonise LEV Standards

National Strategies + Policies



Establish Network of Battery Swapping Stations



Initiate Battery Recycling Centres



Integration of LEV as last-mile services

Infrastructure + Technology



Support Battery-as-a-Service Business



Provide Fiscal Incentives

Business Model + Financing

Thank you!

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