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# Transforming Transport : The Role of Mass Transit, Electric Vehicles, and Micromobility in the Clean Energy Transition in Asia and Pacific



ADB's TRANSPORT SECTOR OFFICE  
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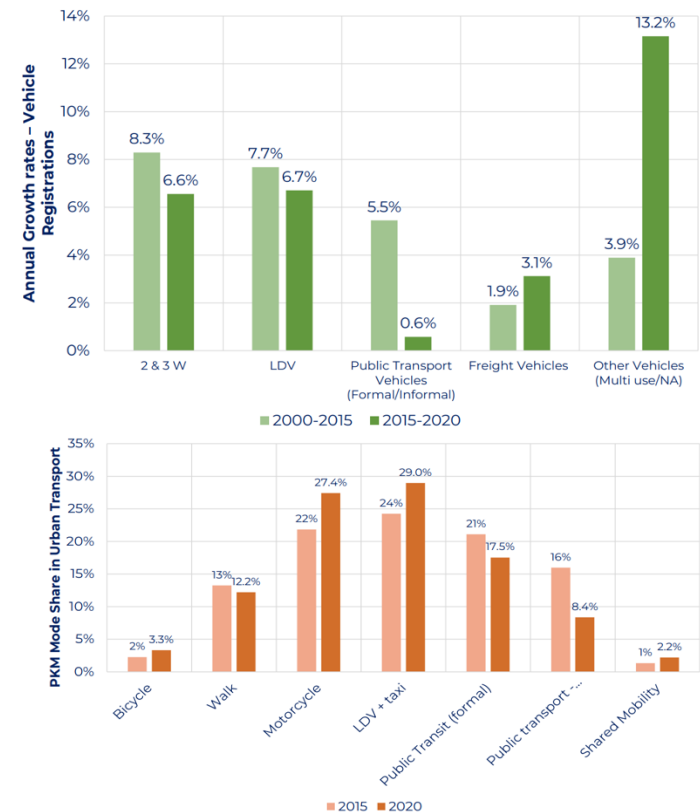


# Transport sector in Asia-Pacific: Key insights

Asia-Pacific has been witnessing rapid increase in travel demand and personal vehicular ownership

- Asia-Pacific constitutes 27% of passenger travel and 36% of freight travel globally
  - Only 30-40% population has access to public transport
  - Since 2015, growth in public transport vehicles ownership has almost completely stagnated
  - Two and three-wheelers which constitute 50% of the vehicles and 18% of passenger kilometers travel
  - Passenger activity is shifting away from buses (formal/informal) to 2- wheelers and private cars
- Over the last two decades, transport demand in Asia has more than doubled.
- By 2050, passenger transport demand in Asia will increase 197% from 2015 levels & surface freight will increase by 199%

Vehicular growth and mode share trends in Asia



Source: [Asian Transport Outlook Climate tracker](#) (2022) [Asian Transport Outlook](#) (2023)

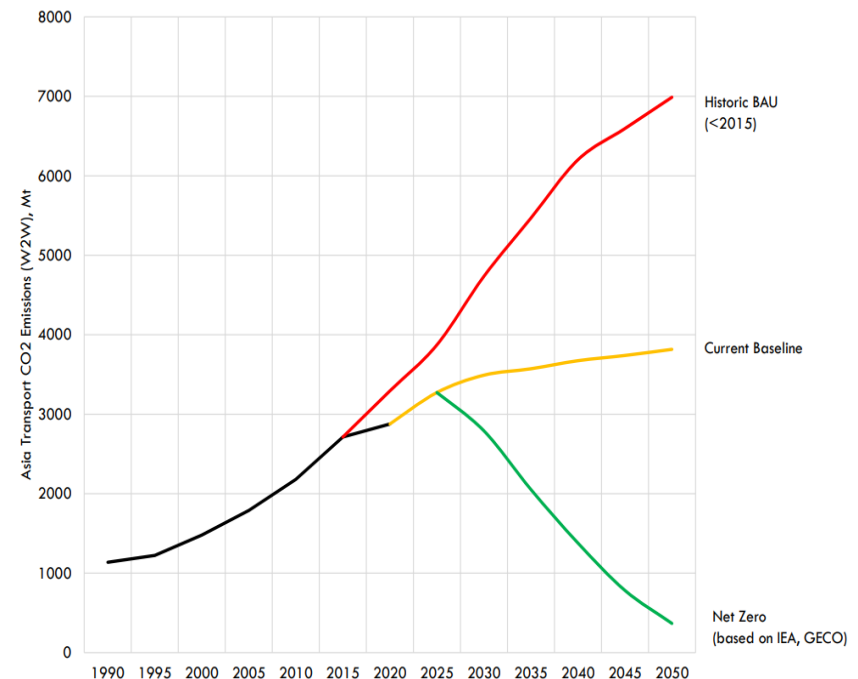


# Transport sector Green House Gas (GHG) Emissions Pathway

## Current growth trajectory of transport GHG emissions needs a significant correction

- In 2018, nearly 60% of transport CO<sub>2</sub> emissions were contributed by passenger cars and medium-heavy duty trucks. 2&3 Wh. contributed 5% of emissions
- Transport sector GHG emissions in Asia increased 243% between 1990 and 2018
- Transport CO<sub>2</sub> emissions in Asia likely to increase from about 2.9 Gt in 2018 to below 4Gt by 2050
- This needs to be reduced between 0.3 to 1 Gt to achieve Paris agreement goals.

### Lifecycle CO<sub>2</sub> emissions trajectories in Asia (2018)



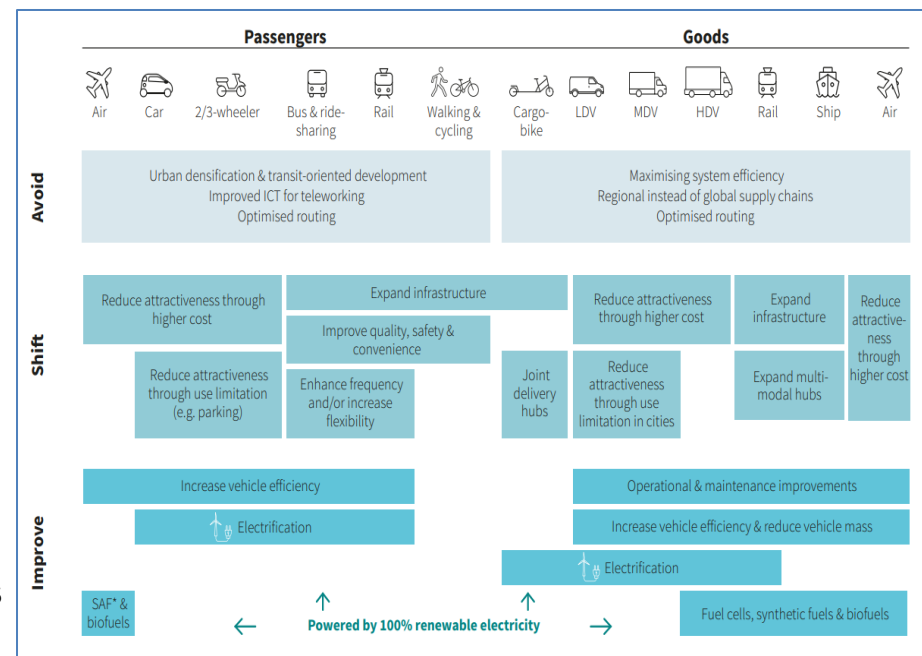
Source: [ATO](#) (2023) [GIZ](#) (2022)

# Actions to Meet Transport and Decarbonization Targets

## Passenger transport needs more policy focus while freight sector needs more industry participation

- Freight CO<sub>2</sub> savings can be through
  - Modal shift of from road to rail- Needs better rail infrastructure
  - Truck decarbonisation through fuel efficiency standards, FCVs, EVs and efficient logistics
- Passenger transport decarbonisation include:
  - Encourage compact cities
  - Improving public transport
  - Adoption of electric vehicles
- Development banks need to focus on these priority areas to achieve decarbonisation goals

### Venues for actions to decarbonise transport



Source: [GIZ](#) (2022)

# Challenges to Meet Decarbonization Targets in Mobility

## Key Challenges



- **Inadequate focus on Multi-Modal Integration:** Each mode is being treated separately leading to significant investments like metro rail systems not yielding desired results.



- **Lack of policy coherence and clear targets:** Local, Regional and National transport policies not aligned with economy-wide climate targets. Few countries have clear GHG targets for transport sector



- **Limited initiatives** to integrate urban transport solution with urban land use planning



- **Difficulty managing informal transport systems:** Informal transport provides majority of public transport but has no Government support



- **Weak implementation capacity:** Limited political will for sustainable mobility and lack of technical capacity for data management, planning and implementation



- **Financing gaps:** Small ticket size of sustainable urban mobility initiatives perceived as weak return on investment. Public-Private Partnerships to pool funding is limited

Source: [GIZ](#) (2022)

# What ADB is Doing Towards Addressing these Challenges

## Assistance to develop new generation mobility program and create an ecosystem to enable mobility shift towards low carbon modes

- **Scale up investment** support to ensure transition of public mass transit system toward more sustainable modes, including the expansion of metro rail, introduction of suburban rail, and the upgrading bus fleet
- **Support Developing member countries(DMCs) to identify and structure integrated urban-transport projects** to provide public transport based total mobility solutions and realign growth and densities along mass transit corridors
- **Increase investment** in multimodal, safe, accessible and convenient public transport infrastructure (incl. road, walking, and cycling infrastructure) in Low- and Middle-Income countries
- **Support DMCs to strengthen and modernize the logistics** infrastructure, improve efficiency and business processes and integrate logistics in mobility plans
- **Improve institutional capacity** to manage public transport and logistics in a holistic way including integrating informal and formal transport, through policy formulation for MMI, institutional strengthening measures, fund creation, MaaS, and capacity building activities
- **Promote reform of paratransit business model** by facilitating the transition towards introducing service contracting and operator reform through consolidation
- **Create financing facilities** for manufacturers and operators of electric vehicles



# Transport Sector's Lending Pipeline in South Asia, 2025

Project Name	Country	Amount (\$m)	Modality
Chennai Metro Rail Project (Tranche 2)	IND	240	MFF
Procurement of Additional Rolling Stock for Chennai Metrorail Phase 1 Operations	IND	197	Project
Maharashtra Climate Smart Connectivity for Inclusive Growth Results Based Lending Program	IND	809	Results Based Lending (RBL)
Bihar State Highway Project (Phase 4)	IND	200	Project
Sikkim Major District Roads Upgradation Project	IND	123	Project
Indore Metro Rail Project	IND	200	Project
Sustainable Urban E-mobility Project	NEP	160	Project
SASEC Chattogram–Dohazari Railway Project	BAN	700	Project
Dhaka Mass Rapid Transit Development Investment Project (Line 5, Southern Route) (Tranche 1)	BAN	300	MFF
SASEC Dhaka-Northwest Corridor Road Project Phase 2	BAN	200	MFF
SASEC Chattogram Port Access Road Improvement Project	BAN	135	Project

# Recent Private Sector Intervention in Transport projects in India

Project Name	Transaction year	Amount (\$m)
Nhava Sheva Container Terminal Financing Project	2023	61.4
GreenCell Electric Bus Financing Project	2022	40
JBM Electric Bus Financing Projects	2024	49.4
Nhava Sheva Freeport Terminal Private Limited	Planned	69.6



**Thank you!**

