



# Financing of Transport Infrastructure and Services for Sustainable Development



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ADB

# The Transport Problem

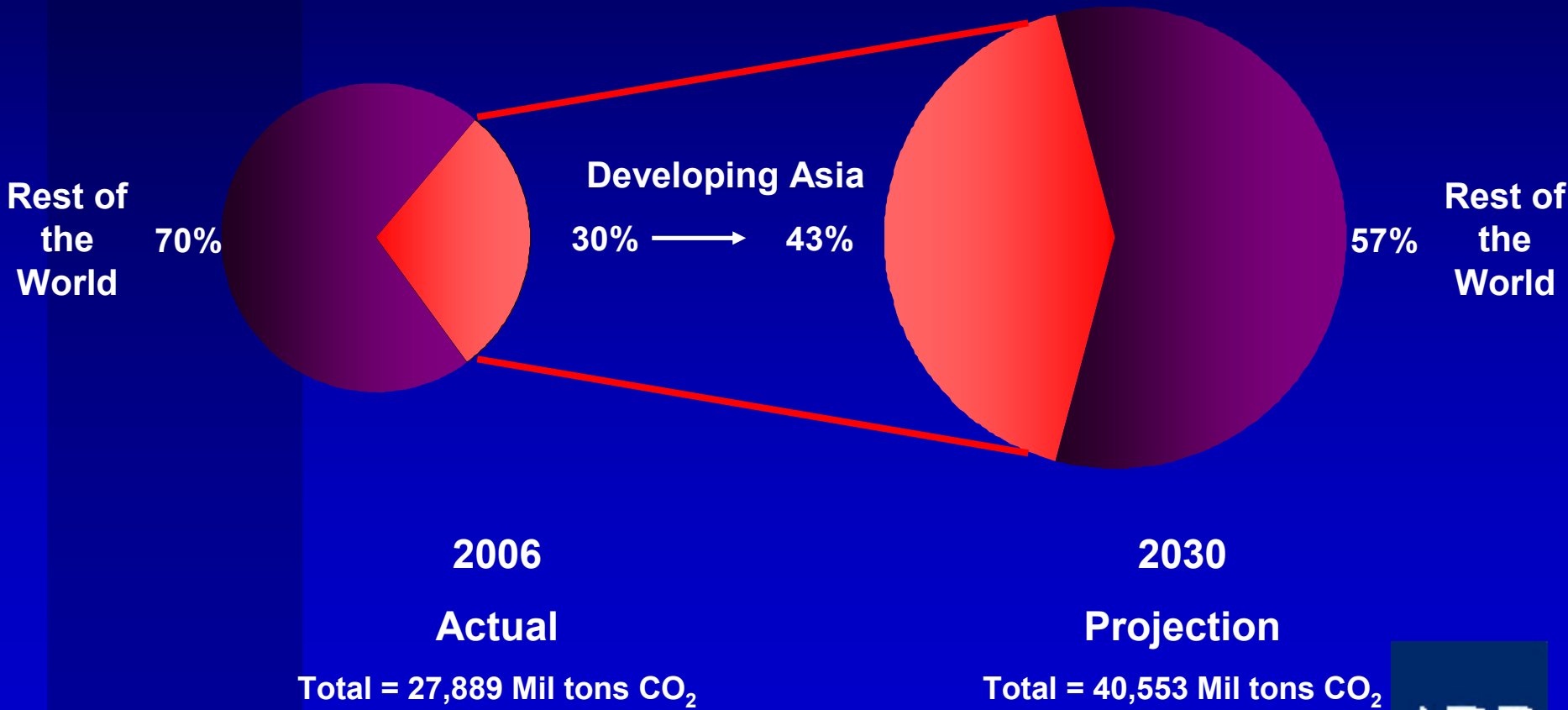
- Motorization synonymous with growth and progress
- “Predict and provide” mantra
- Transport, the inconvenient truth:
  - congestion (~2-5% of GDP, transportation costs)
  - carbon emissions (~25% and fastest growing sector)
  - fuel security (~30% of World energy use, \$50-150/barrel )
  - air pollution (respiratory health risks)
  - accidents (5<sup>th</sup> leading cause of death by 2030)
  - inequality (80% of investment for 20% of travelers\*)
- Externalities not integrated in transport policy making

\* estimate

The logo for the Asian Development Bank (ADB), consisting of the letters 'ADB' in a white serif font on a dark blue square background.

# The Outcome

## Developing Asia's Share in Global CO<sub>2</sub> Emissions from Energy Consumption



Source: ADB, data from IEA World Energy Outlook 2008



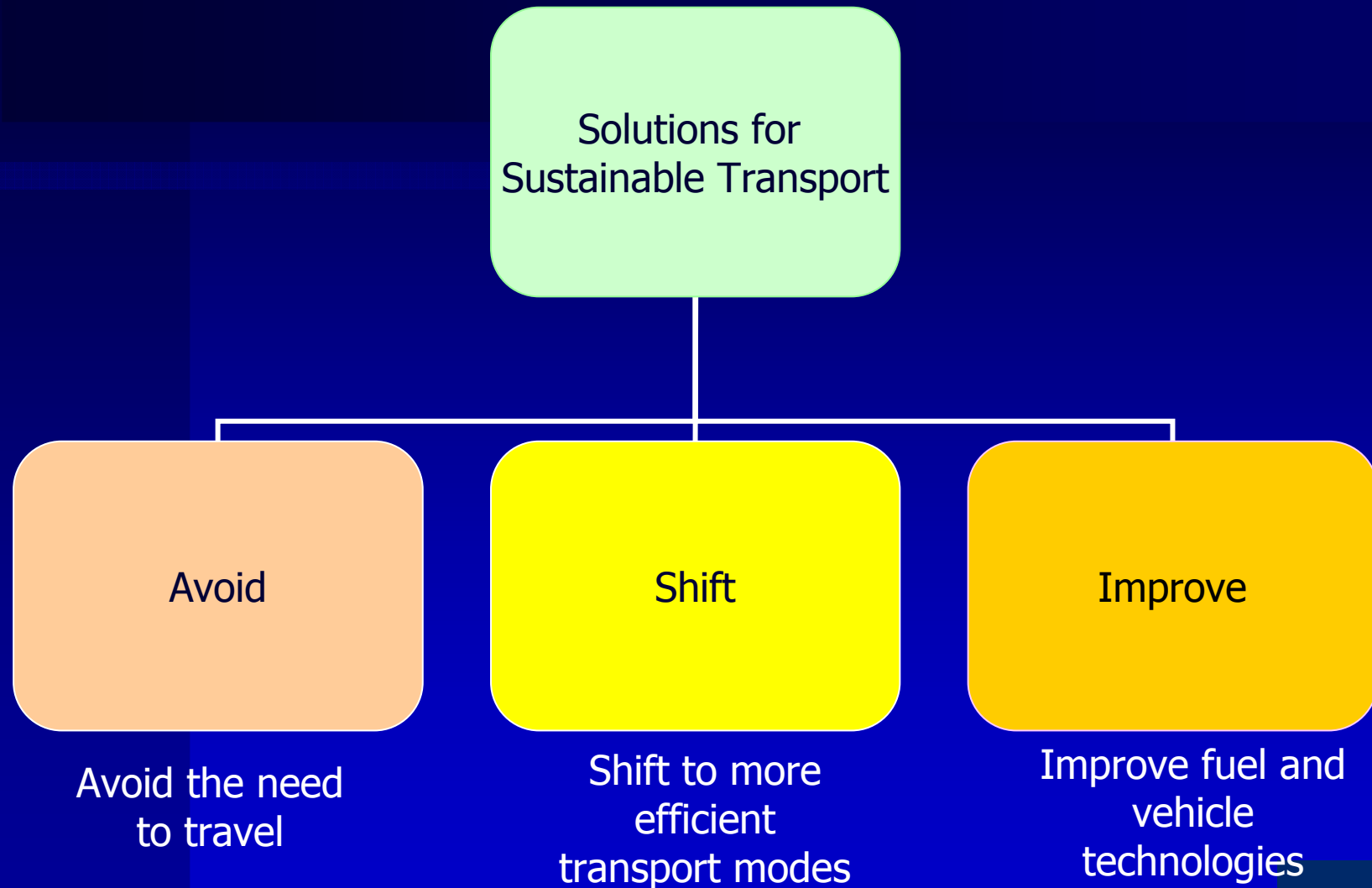
# The Financing Problem

- Investment needs in Asia are very large and increasing rapidly  
~ US\$ 50 billion per annum
- Investments in Developing Countries as much again
- National budgets are inadequate
- Donor assistance is only a small percentage

	Road	Rail
New	19,389	339
Maintenance	25,374	3,084

Annual investment needs US\$ million (2005-2010)

# A Sustainable Transport Solution



# Existing Financing

- IFIs
- Bilateral donors
- Global Environment Fund (GEF)
- Climate Investment Funds (CIF)
  - Clean Technology Fund (CTF)
- Private Sector (PPP modalities)
- National budgets (largest share of total)

# Existing Global Finance Clean Development Mechanism

- CDM difficult to apply for transport
  - 2 transport projects out of ~2000 registered
  - 8 out of ~4000 projects in the pipeline
  - 6 approved methodologies
  - 0.04% of the CERs issued
  - **Contrast 23% of CO2 emissions with 0.04% share of CDM funds**

# Existing Global Finance

## Relevance of carbon finance

- A Bus Rapid Transit (BRT) project
  - 100 kms @ \$5 million = \$500 million
  - Savings in CO2 (32,000 tons per year)
  - NPV (10%, 21 years) = \$2.5 million
- % capital cost offset by future carbon streams = 0.5%



Transjakarta

Will carbon finance affect decisions?



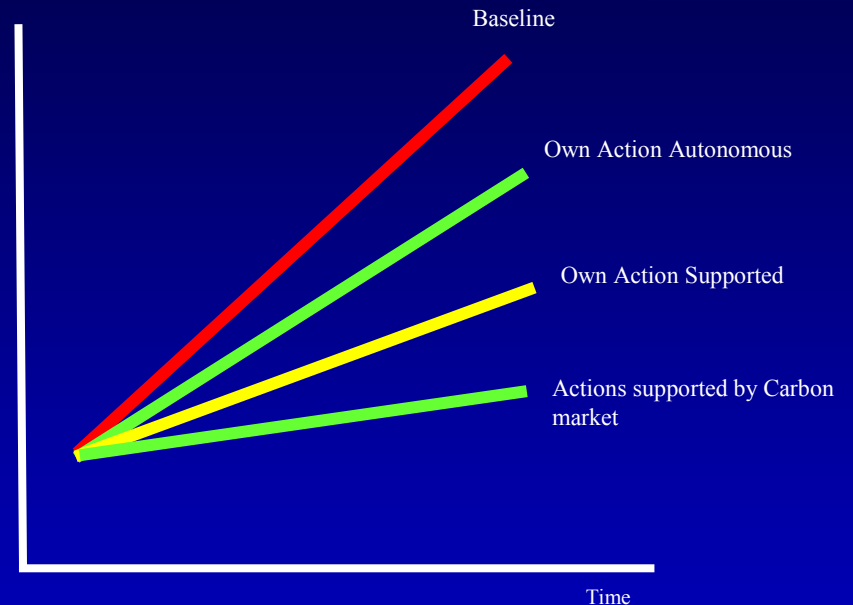
## Comment on Existing Financing

- Traditional focus – mobility/congestion relief
- Negative externalities and climate change are often not on the radar of Decision makers
- Inadequate global financial support
  - some climate finance, but not enough
  - limited (no) sustainable development finance
- Need to price externalities
- Need for sustainable development finances

# Carbon Finance - Future Options

## Nationally Appropriate Mitigation Actions (NAMAs)

Types of NAMAs	MRVs	Examples from Transport sector
Voluntary and Unilateral Action without support	Not required	Fuel economy stds
Actions that require support (technology, finance, capacity building)	Mutually agreed MRV procedures	Vehicle Technology e.g. Electric vehicles
Actions motivated by carbon market	Similar to CDM	Congestion charges, Public transport



### Sectoral No-lose targets

- Credits awarded if emissions kept below a pre-agreed level
- No penalties if target is exceeded
- No-lose target set below BAU

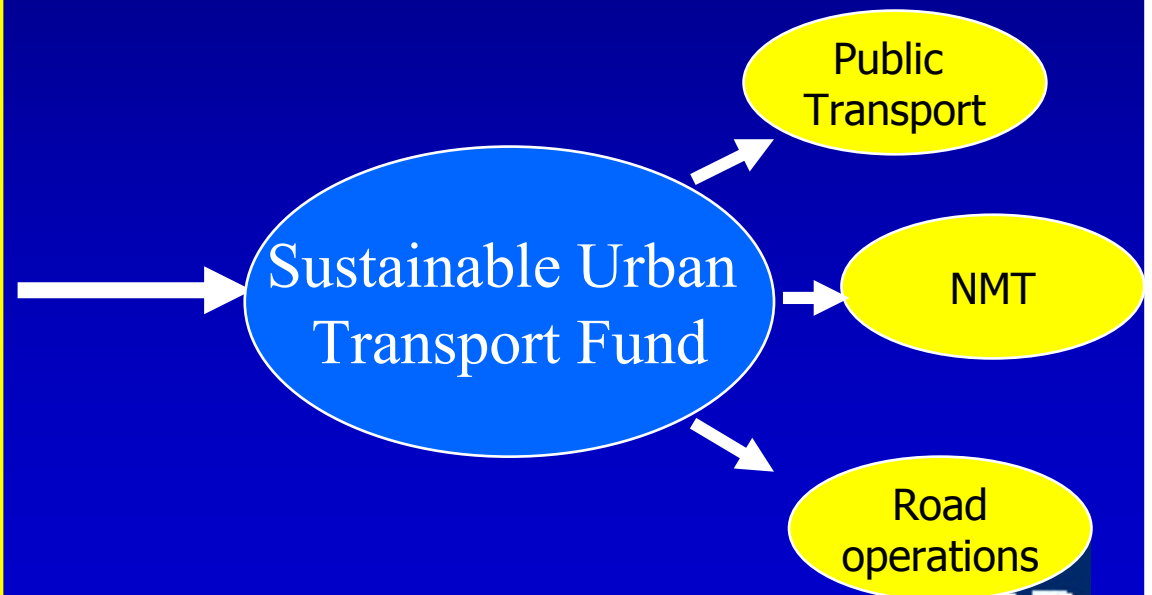
### Expanded and Improved CDM

- Simplified methodology for transport
- New approach to additionality
- CERs from projects with certified co-benefits accorded a higher value
  - e.g. Gold Standard

# Financing Solutions

- Finding local solutions is vital
  - 2500+ cities in Asia are planning infrastructure investments
  - National transport network systems development
- Fiscal sustainability of transport systems is key

- Annual vehicle registration
- Fuel levies (surcharge)
- Parking fees
- Fines and violations
- Betterment taxes
- Employer taxes
- Congestion charging
- Public transport fares



# Financing Solutions Examples



## London Congestion Charging

- Revenues of £ 250 million
- Legal requirement to reinvest profits in Public Transport
- Transformed traffic flows
  - Buses increased by 25%
  - Bicycles increased by 49%

## Velib, Paris

- 16,000 bikes 1,200 stations
- Trips 75,000 to 120,000 (sunny days)
- Revenue \$30 million from subscriptions and rental fees
- Operator pays fixed yearly fee (\$ 5 million) for advertising rights + penalty for performance lapses

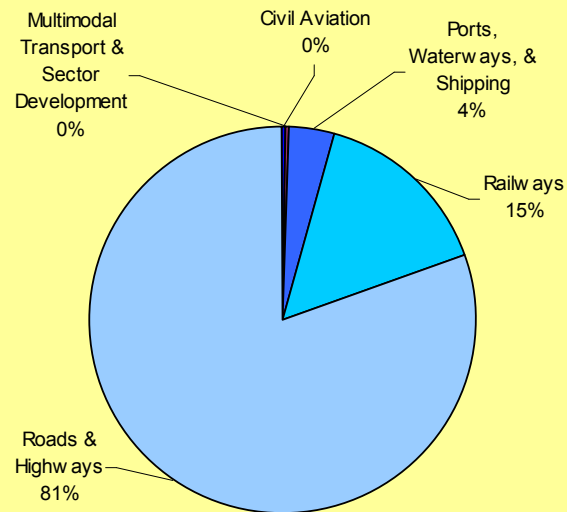
## Surat city, India

- City had no public transport system
- Private vehicles increase 3.5 times in 15 years
- Govt. created a dedicated urban transport fund through budgetary allocation
- Additional revenue components include vehicle taxes, parking charges and advertising revenue
- Used for creating public transport system and developing CNG infrastructure

# ADB's Sustainable Transport Initiative

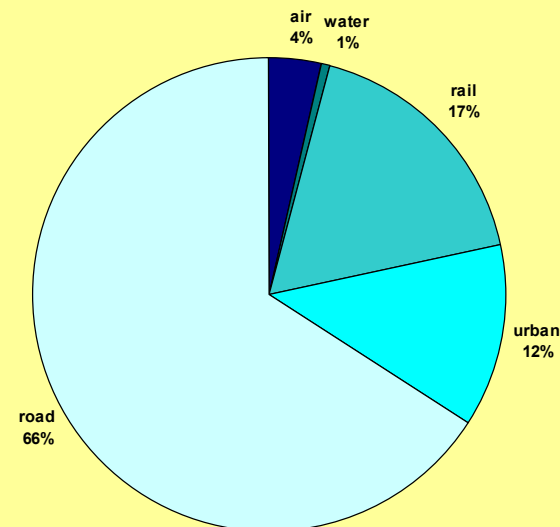
Transport is a priority sector for ADB lending

ADB Transport Lending - Public Sector  
(2004-2008)



**\$2.19 billion per annum**

ADB's Transport Lending Pipeline - Transport Sector  
(2009-2011)

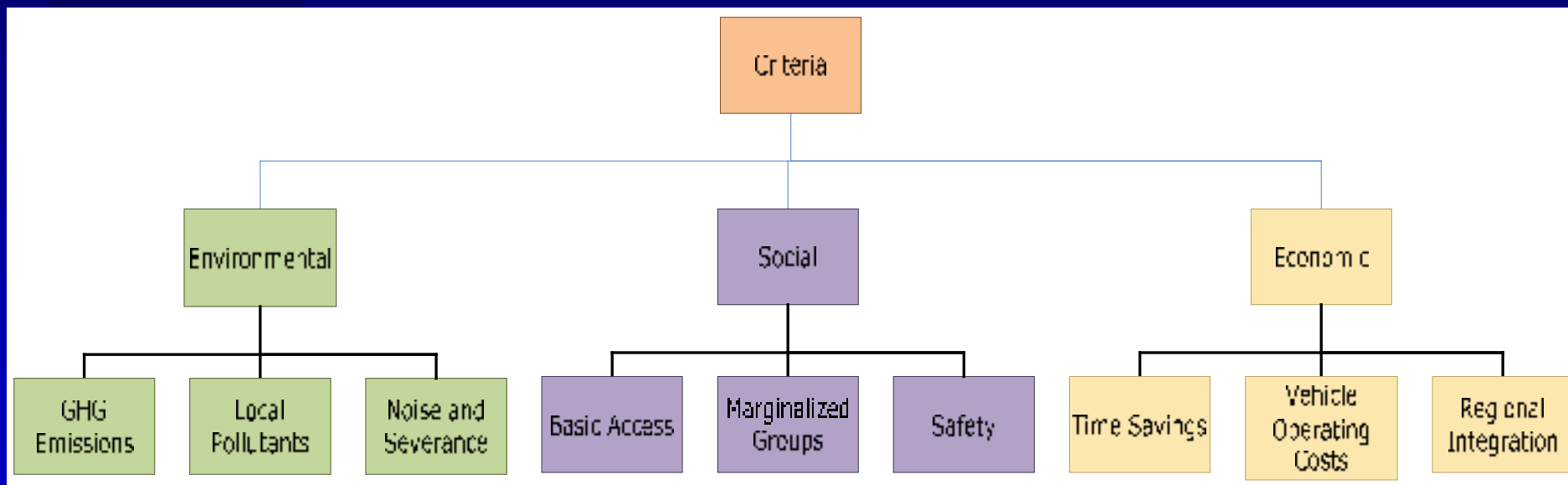


**\$5.89 billion per annum**

# Defining Sustainability

- Encompass the main categories of sustainable development:
  - Environmental
  - Social
  - Economic
- A sustainable transport system is one which is
  - Environmentally friendly
  - Accessible
  - Affordable

# STI Evaluation Criteria



# Recommendations

- Need to push the global community to support sustainable, low carbon transport
- MDB's can support by:
  - Diversifying their investment pipeline
  - Providing more policy and advisory support
- Developing countries need to proactively plan and seek support
- Partnership for Sustainable, Low-Carbon transport in developing countries



## For More Information

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