TRANSPORT AND CLIMATE CHANGE IN ASIA & the PACIFIC

1. BENEFITS OF SUSTAINABLE, LOW CARBON TRANSPORT

**ENVIRONMENT**
Reduces climate impacts; improves urban air quality and public health
Asian cities have high pollution levels, zero-emission transport could reduce up to 80% of pollution

**ECONOMY**
Reduces congestion, dependence on fossil fuel imports, infrastructure costs
Congestion in Asia costs 2-5% of national GDP every year

**SOCIETY**
Increases equitable job access; creates more jobs than other sectors
The transport sector created 2.3 million jobs in the Philippines in 2011

2. DRIVERS OF TRANSPORT DEMAND

Demand for transport is driven by growth in Asia:

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<tr>
<th>Region</th>
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<th>2015</th>
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<tr>
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Motorization growth:

- **Asia**
  - Economic growth: +116%
  - Population growth: +21%
  - 51.4 cars per 1,000 people (increase from 2000 to 2015)
  - 96.4 cars per 1,000 people

- **Oceania**
  - 494.4 cars per 1,000 people (increase from 2000 to 2015)
  - 540.1 cars per 1,000 people

3. TRANSPORT EMISSIONS

Transport Emissions Growth in Asia-Oceania:

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Total transport CO₂ emissions from Asia and Oceania (excluding international aviation and shipping):

**2.5 GIGATONNES**

4. TRANSPORT MITIGATION POTENTIAL

To reach Paris Agreement targets, global transport CO₂ emissions must

- **2 GIGATONNES** by 2050
- More than 75% below current levels

Regional transport CO₂ emissions per capita:

- **AFRICA & CARIBBEAN**: 0.9 tonnes
- **ASIA**: 0.52 tonnes
- **EUROPE**: 1.49 tonnes
- **NORTH AMERICA**: 5.08 tonnes
- **LATIN AMERICA**: 2.9 tonnes
- **OCEANIA**: 0.24 tonnes

5. NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)

80% of NDCs in Asia and the Pacific refer to transport as a mitigation source

5 NDCs have transport emission mitigation targets, including Bangladesh, Brunei Darussalam, Japan, Marshall Islands and Palestine
The Avoid-Shift-Improve framework is a comprehensive approach to implementing sustainable, low carbon transport.

### Avoid
Avoid and reduce the need for motorised travel

- New Delhi, Qatar, Shanghai, Seoul among others expanded metro rail
- Sri Lanka aims at complete ban of fossil fuel cars by 2040

### Shift
Shift to more environmentally friendly modes

- Electric Mobility
- Uzbekistan and Kyrgyzstan introduced zero import duties on electric vehicles
- Hanoi opened its first BRT corridor in 2017
- Electric Mobility
- Shenzhen, China replaced all of its buses (nearly 17,000) with EVs by the end of 2017

### Improve
Improve energy efficiency of transport modes

- Fuel Economy
- India introduced heavy-duty vehicle fuel economy standards
- Transport Demand Management
- Singapore reduced vehicle growth rate to 0% in 2018
- Renewal Energy
- Australia invested USD 1.75 million for biofuel production
- Urban Public Transport
- Urban Public Transport
- South Korea opened a 61-km HSR service at the end of 2016

### Emission Reduction Targets
Countries have opportunity to set emission targets in NDCs and create long-term visions for transport decarbonisation by 2050

### Public Transport
A broad shift to public transport can help to reduce congestion, air pollution and GHG emissions

### Fuel Economy
More ambitious fuel economy standards can support a more rapid transition to low-emission fleets

### New Mobility Services
Shared mobility has potential to reduce emissions if closely aligned with public transport and walking and cycling

### Walking and Cycling
A better balance among Avoid-Shift-Improve measures can be achieved through more walking and cycling measures

The TCC-GSR is primarily supported by:

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