Mobilising Sustainable Urban Transport for Global Climate Action

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The Partnership on Sustainable, Low Carbon Transport (SLoCaT)

- Member-driven organisation with 90+ members: International organisations, development banks, NGOs, private sector, academia.

- Mission: Integrate sustainable transport into global policy frameworks for sustainable development and climate change action; and leverage knowledge and action in support of their implementation.
Why do we need sustainable urban transport?

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Press “Submit”
Transport emissions significant and growing as share of total emissions

Share of transport Sector GHG Emissions by Mode (2015)

- Rail: 3%
- Two-and-Three Wheelers: 4%
- Buses and Minibuses: 5%
- Shipping: 11%
- Aviation: 11%
- Trucks: 21%
- Light Duty Vehicles: 45%

Share of Transport on Economy-wide Emissions: 14%
Heavy duty vehicles are a major cause of freight transport CO₂ emissions

Passenger and Freight Modal Shares - Activity, Energy Consumption and CO₂ Emissions (2015)

Road transport accounts for 75% of transport emissions.
Transport Demand Drivers and Impacts (2000 to 2017)
Transport emissions share shifting across global regions

Regional Share and International Aviation and Shipping Shares of Transport CO₂ Emissions (2000-2016)

Growth between 2000 and 2016

Paris Agreement on Climate Change as historic milestone in climate action

Target:

“to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit increase to 1.5°C”

Reality:
Nationally determined contributions lack specific targets on transport emissions.
Private motorisation low in non-OECD countries but expected to grow

Growth of Passenger Activity for Motorized Transport Modes

<table>
<thead>
<tr>
<th>Growth Between 2000 and 2015</th>
<th>OECD Countries</th>
<th>Non-OECD Countries</th>
<th>Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2015</td>
<td>-8%</td>
<td>266%</td>
<td>45%</td>
</tr>
<tr>
<td>2000-2015</td>
<td>-23%</td>
<td>87%</td>
<td>59%</td>
</tr>
<tr>
<td>2000-2015</td>
<td>6%</td>
<td>179%</td>
<td>150%</td>
</tr>
<tr>
<td>2000-2015</td>
<td>91%</td>
<td>184%</td>
<td>156%</td>
</tr>
<tr>
<td>2000-2015</td>
<td>44%</td>
<td>425%</td>
<td>145%</td>
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</tbody>
</table>
Emission gap growing, but low carbon transport has high mitigation potential

Projected Transport CO₂ Emissions: BAU and Low Carbon Pathways (2010 to 2050)

Transport has to go down to 2 Gt CO₂ by 2050
What kind of sustainable urban transport measures are you aware of?

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Avoid-Shift-Improve framework to support low carbon transport implementation

Avoid
Avoid and reduce the need for motorized travel

Shift
Shift to more environmentally friendly modes

Improve
Improve energy efficiency of transport modes
Infrastructure options for low carbon transport expand globally

Transport Infrastructure Increase (2000 to 2017) - BRT, LRT, MRT, HSR
More cities embrace measures on transport demand management

Overview of Major TDM Measures by region

Transport Demand Management Measures (Number of Cities)

- Vehicle Restrictions (covering measures limiting the number of vehicles entering the city or limiting the ownership of private vehicles)
- Low Emission Zones (restricting vehicles based on their pollution levels from certain areas)
- Congestion Charging (charging road users for driving within the city)
London induced a shift to sustainable transport forms

London Trip Mode Share

- 1995: 
- 1996: 
- 1997: 
- 1998: 
- 1999: 
- 2000: 
- 2001: 
- 2002: 
- 2003: 
- 2004: 
- 2005: 
- 2006: 
- 2007: 
- 2008: 
- 2009: 
- 2010: 
- 2011: 
- 2012: 
- 2013: 
- 2014: 
- 2015:

Introduction of Low Emission Zone
Phase 1: February 2008
Phase 2: January 2012

Congestion charging and low emission zone
Singapore decoupled economic growth from transport emissions

Singapore Economic vs. Transport Growth (1991 to 2014)

- Positive impacts of congestion pricing, quota system, and ERP

- GDP +91%
- Vehicle Activity (veh-km per capita) -16%
- Transport Emission (CO₂ per capita) -21%
- Roadspace -29%

Singapore’s Major TDM Measures
- 1975 Congestion Pricing
- 1990 Vehicle Quota System
- 1998 Electronic Road Pricing
Sustainable urban mobility plans (SUMPs) are comprehensive planning tools

SUMPs by region and European countries

- Africa: 5%
- Asia: 15%
- Europe: 63%
- Latin America and the Caribbean: 8%
- North America: 6%
- Oceania: 3%

SUMPs in Europe

- United Kingdom
- Germany
- France
- Slovenia
- Spain
- Italy
- Other European Countries
Transit, walking and cycling are more efficient

Comparison of Cycling and Walking to Other Modes

- **0g CO₂ per passenger-km**
  - Capacity: 19,000 people per hour

- **0g CO₂ per passenger-km**
  - Capacity: 14,000 people per hour

- **28g CO₂ per passenger-km**
  - Capacity: 22,000 people per hour

- **56g CO₂ per passenger-km**
  - Capacity: 9,000 people per hour

- **81g CO₂ per passenger-km**
  - Capacity: 81 people per hour

- **No information on people per hour**

- **107g CO₂ per passenger-km**
  - Capacity: 2,000 people per hour
space required to transport 60 people

car  bus  bicycle

(Poster in city of Muenster Planning Office, August 2001) Credit: PressOffice City of Munster, Germany
Bus Rapid Transit slowing down after strong growth in past decade

Development of Bus Rapid Transit (1968 to 2017)

Bikesharing growth accelerated through dockless services

Growth of Bikesharing (2007 to 2017)

Transport Decarbonisation Alliance

A unique collaboration between Countries, Cities/Regions and Companies to accelerate the worldwide transformation of the transport sector towards a net-zero emission mobility system before 2050.

Join us!
Transport and Climate Change 2018
Global Status Report

Download the report: slocat.net/tcc-gsr

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Thank You!