Regional Expert Group Meeting on Sustainable and Inclusive Transport Development & 2nd Asia BRTS Conference 29 Sept.-1 Oct 2014, Ahmedabad, India

Global and Regional Perspectives of Sustainable Transport Development

Madan B. Regmi, DEng
Transport Division
UNESCAP, Bangkok
Outline

- United Nations Mandates
- Rio+20 Conference Outcome
- State of Transport in Asia
- Pattern of Urban Development
- Possible Policy Options
- Concluding Remarks
United Nations Mandates

Global
- Rio+20, focus on three pillars of sustainability
  - Economic
  - Social
  - Environmental
- Millennium Development Goals, 8
- Kyoto Protocol – new protocol by 2015

Regional
  - Sustainable transport development (10 Thematic Areas)
- Forum of Asian Ministers of Transport, Nov. 2013
- Sustainable Development Goals (beyond 2015)
Rio+20 Outcome Document (Transport)

- Transport and mobility are key to Sustainable Development
- Efficient movement of goods and people
- Energy efficient multimodal transport system
- Clean fuels and vehicles
- Integrated approach to planning
- Affordable and sustainable transport
- Sustainable transit transport - need of landlocked and transit countries
- Capacity development
Post 2015 Development Agenda

- Sustainable Development Goals
- Open Working Group, adopted 17 goals and 169 targets on 19 July 2014 and recommended to GA
- Inclusion of Transport in SDG:
  - (11.2) by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
  - (9.1) Develop quality, reliable, sustainable and resilient infrastructure
  - (2.3) equal access to markets
  - (2.a) increase investment in rural infrastructure
  - (13.2) Integrate climate change measures into national policies, strategies and planning
- SDG agreed by Sept. 2015
Growth of railways, road and vehicles

Growth Rate

- China
- Iran
- Japan
- Kazakhstan
- ROK
- Pakistan
- Russian Federation
- Turkey

Legend:
- **Green** Rail Lines (1990-2010)
- **Orange** Road (1990 - 2010)
- **Blue** Vehicles (1993-2008)
Railway and water transport are more environmentally friendly than roads.

- Majority of investment is in roads.
- Rail and Urban transport investment increasing.
- Limited investment aviation, inland water transport and coastal shipping.

(ESCAP, 2013)
Energy consumption

**Energy Consumption, Transport (ESCAP Countries)**

- World: 236.2 mil TOE
- ESCAP: 64.8 mil TOE (27.4% of world)
- Road: 81%
- Aviation: 13%
- Rail: 4%
- Others: 2%

![Energy consumption chart](energy_chart.png)
Transport emissions by modes, ESCAP

CO2 emission: By Mode of Transport, ESCAP

Million tons of CO2

Road 83%
Aviation 13%
Rail 3%
Others 1%

Transport CO2 Emissions, 2010
<table>
<thead>
<tr>
<th>Million Tons, 2010</th>
<th>Average increase, 2005-2010</th>
<th>Emission Per Capita, 2010</th>
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<tbody>
<tr>
<td>China</td>
<td>424.29</td>
<td>22.67%</td>
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<td>Japan</td>
<td>201.71</td>
<td>21.56% Brunei Darussalam</td>
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<td>India</td>
<td>152.62</td>
<td>18.91%</td>
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<td>Russian Federation</td>
<td>144.31</td>
<td>15.53% Republic of Korea</td>
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<td>Iran (Islamic Rep. of)</td>
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<td>Indonesia</td>
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<td>Tajikistan</td>
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Source: IEA, 2010
Growing pattern of urban development

- Half of world’s people live in town and cities
- 90% of world’s urban expansion in developing countries
- Unsustainable pattern of growth of big and megacities
- Cities account for more than 2/3 of energy use and GHG emissions

- Car centered developments
- Lack of affordable public transport
- Cost of congestion - 2-5% of GDP
- Issues of secondary and small sized cities
Policy options

Minimize CO₂ intensity of transport energy: use of low carbon fuel/energy

Minimize km/person (travel demand): land-use, transport pricing

Maximize the vehicle occupancy rate: higher density, incentives for mode choice

Move people in higher capacity vehicle: Provision of public transport

Improve energy efficiency of vehicles: fuel economy etc
What are possible Policy Options?

- Integrated transport planning
- Improvement of public transportation
  - MRT, LRT, BRT, Public Bus
- Modal shift to energy efficient modes
  - Technology, Hybrid, NMT
- Travel demand management
  - Use of ICT, Compact city planning
- Congestion management
  - Road pricing, car free areas/days
- Social inclusion
  - Extend reach of transport to vulnerable groups
  - Affordability
Concluding remarks

- Need to develop and implement policies
- Combination of policies essential to move towards sustainable & inclusive transport systems
- Many successful examples in Asia

- BRTs - Bangkok, India, Pakistan, China
- Transit Oriented Development - Hong Kong, Singapore, Japan
- Compact city planning - Tianjin eco city
- Electronic Road Pricing - Singapore
- Electric vehicles and charging infrastructure – Kanagawa, Goto Islands, Nagasaki, Shanghai, others city in Asia?
- NMT - focus on walking and cycling
Thank you

regmi.unescap@un.org