

# **Fourth Regional EST Forum in Asia**

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## **Report on Breakout Session 5**

*Singapore*

*Myanmar*

*Bhutan*

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# Singapore

<b>PT planning, Modal integration, TDM</b>	<ul style="list-style-type: none"><li>◆ Make public transport a choice mode – by expanding rail network, extending bus priority, providing travel information, and enhancing physical accessibility</li><li>◆ Integrate inter-modal transport facilities with building development</li><li>◆ Demand management through ownership control (e.g. quote system) and usage restraint (e.g. ERP)</li></ul>
<b>NMT</b>	<ul style="list-style-type: none"><li>◆ Better pedestrian facilities like covered walkways, pedestrianized streets</li><li>◆ Parking facilities for bicycles at rail stations and bus interchanges</li></ul>
<b>Land-use measures</b>	<ul style="list-style-type: none"><li>◆ Concept Plans and Master Plans as the basis</li><li>◆ Coordinated efforts between government agencies to integrate transport and land-use planning</li><li>◆ Reduce travel by bringing jobs and home closer</li></ul>
<b>Road safety measures, Public health issues</b>	<ul style="list-style-type: none"><li>◆ Concerns over non-compliance with PM<sub>2.5</sub> standard and its health implication</li></ul>

# Myanmar

<b>PT planning, Modal integration, TDM</b>	<ul style="list-style-type: none"><li>◆ Public transport system with buses, taxis, circular rail and ferries.</li></ul>
<b>NMT</b>	<ul style="list-style-type: none"><li>◆ Bicycles are used in Yangon and Mandalay</li><li>◆ NMT also plays a major role in other cities and rural areas</li><li>◆ NMT is managed under regulations</li></ul>
<b>Land-use measures</b>	<ul style="list-style-type: none"><li>◆ Not mentioned</li></ul>
<b>Road safety measures, Public health issues</b>	<ul style="list-style-type: none"><li>◆ National Road Safety Action Plan to reduce traffic accidents and casualties</li><li>◆ Roadside air quality measurements were taken in Yangon and Mandalay in 2007 and 2008, but no reference was made to public health implication</li></ul>

# Bhutan

<b>PT planning, Modal integration, TDM</b>	<ul style="list-style-type: none"><li>◆ Buses and taxis accounted for 54% of transport use</li><li>◆ Number of vehicles almost tripled between 1997 and 2007; by end of 2008, there were about 40,000 vehicles – still a relatively small number</li><li>◆ The question is whether to set a ceiling for vehicle numbers, say at 100,000.</li></ul>
<b>NMT</b>	<ul style="list-style-type: none"><li>◆ NMT almost non-existent</li><li>◆ Use of cycle limited to a few towns</li><li>◆ Good footpath network only in Thimphu</li></ul>
<b>Land-use measures</b>	<ul style="list-style-type: none"><li>◆ Not mentioned</li></ul>
<b>Road safety measures, Public health issues</b>	<ul style="list-style-type: none"><li>◆ High traffic accident rate</li><li>◆ Emission standards were revised since March 2008, but no reference was made to public health implication</li></ul>

# General Comments

## Singapore

- Leader in EST
- Clear vision and targets
- Has been doing well in land-use transport integration
- Efforts to promote NMT (like provision of bike parking in satellite towns) is encouraging
- Can do more with respect to air quality data dissemination and air quality standards review

# General Comments

## Myanmar

- Connection of traffic emission to public health is missing
- Vehicles are taking over part of the cities, prohibiting the use of NMT
- Share of bicycle is high, but the environment for cycling is not safe
- Finance Department has to be involved in order for any EST plans to become successful

# General Comments

## Bhutan

- Connection of traffic emission to public health is missing
- Finance Department has to be involved in order for any EST plans to become successful
- With growing vehicle numbers and reliance on fuel imports, Bhutan should consider setting fuel standards and emission standards

# Recommendations

# Dual approach to EST

- Hardware is important to achieving EST – infrastructure, technology, equipment
- Software is equally important – policy, education, public awareness and participation, capacity building, information

# Data

- Data collection, management, analyses and dissemination
- Different types of data, such as number of vehicles, vehicle kilometre traveled, traffic accidents, air quality, etc.
- Provides information to the public
- Provides information to policy makers
- To assess effectiveness of EST plans

# Air quality standards

- Setting ambient air quality standards as yardsticks for air quality management
- Regular review and revision of air quality standards may serve as a policy driver, especially when air quality improvement is gradually flattening out
- Air quality standards based on WHO AQG
- Air quality standards for PM<sub>2.5</sub>

# Vision of your city

- What kind of city do you want?
  - Population, density, size
  - Land-use plan
  - Urban living space
  - Movement of vehicles / mobility of people / accessibility of the city?
  - City for vehicles or city for people?