

Significance of Transport Now and in the Future: Emissions and Overall Sustainability

TRANSPORTATION AND CLIMATE CHANGE

ADB – ESCAP Workshop

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ADB

Dhaka, Bangladesh



Photo: Karl Fjellstrom

Shanghai, China



Photo: Cornie Huizenga

Hanoi, Vietnam



Photo: Corrie Huizenga

Manila, Philippines

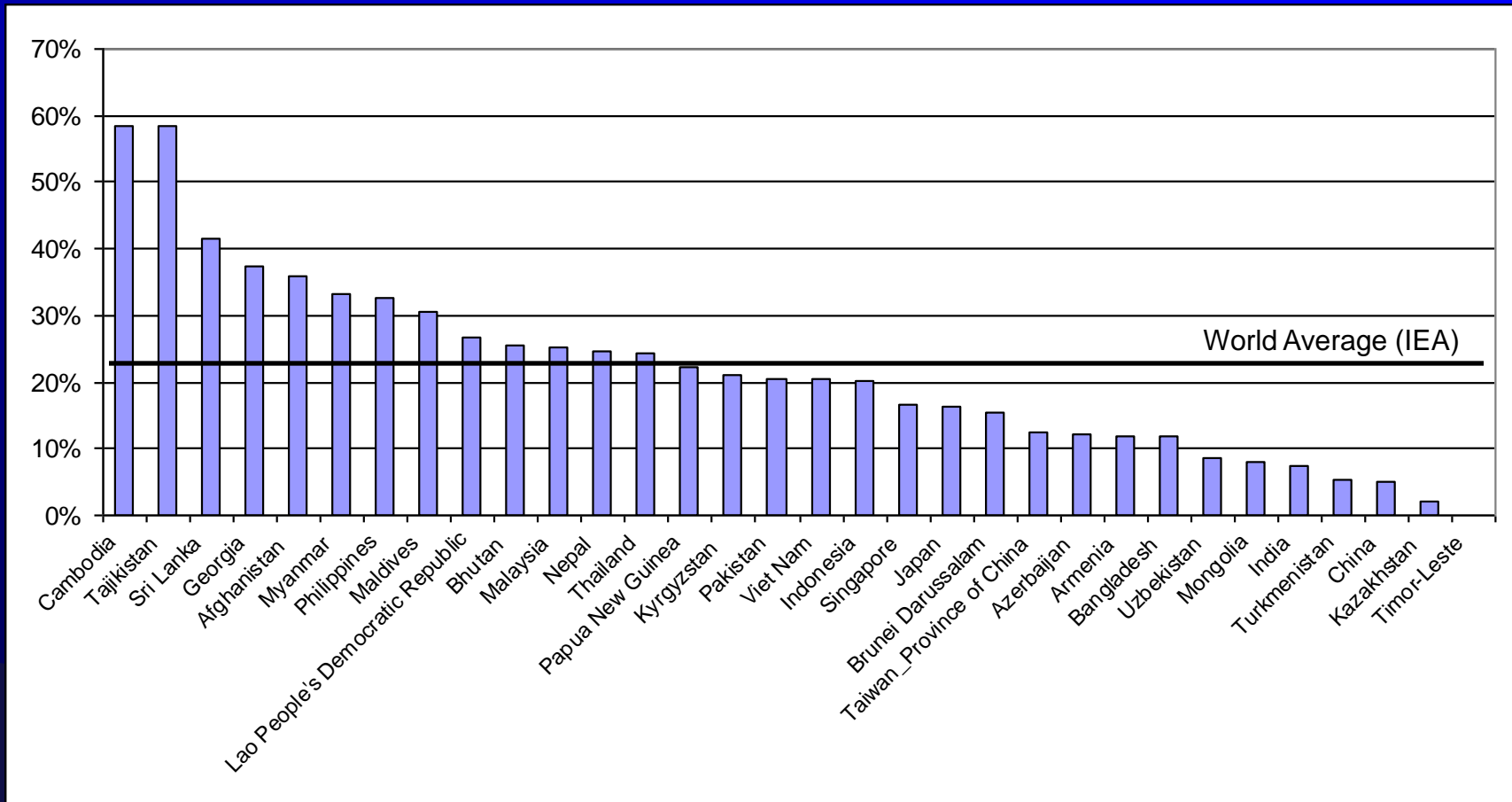


Beijing, China



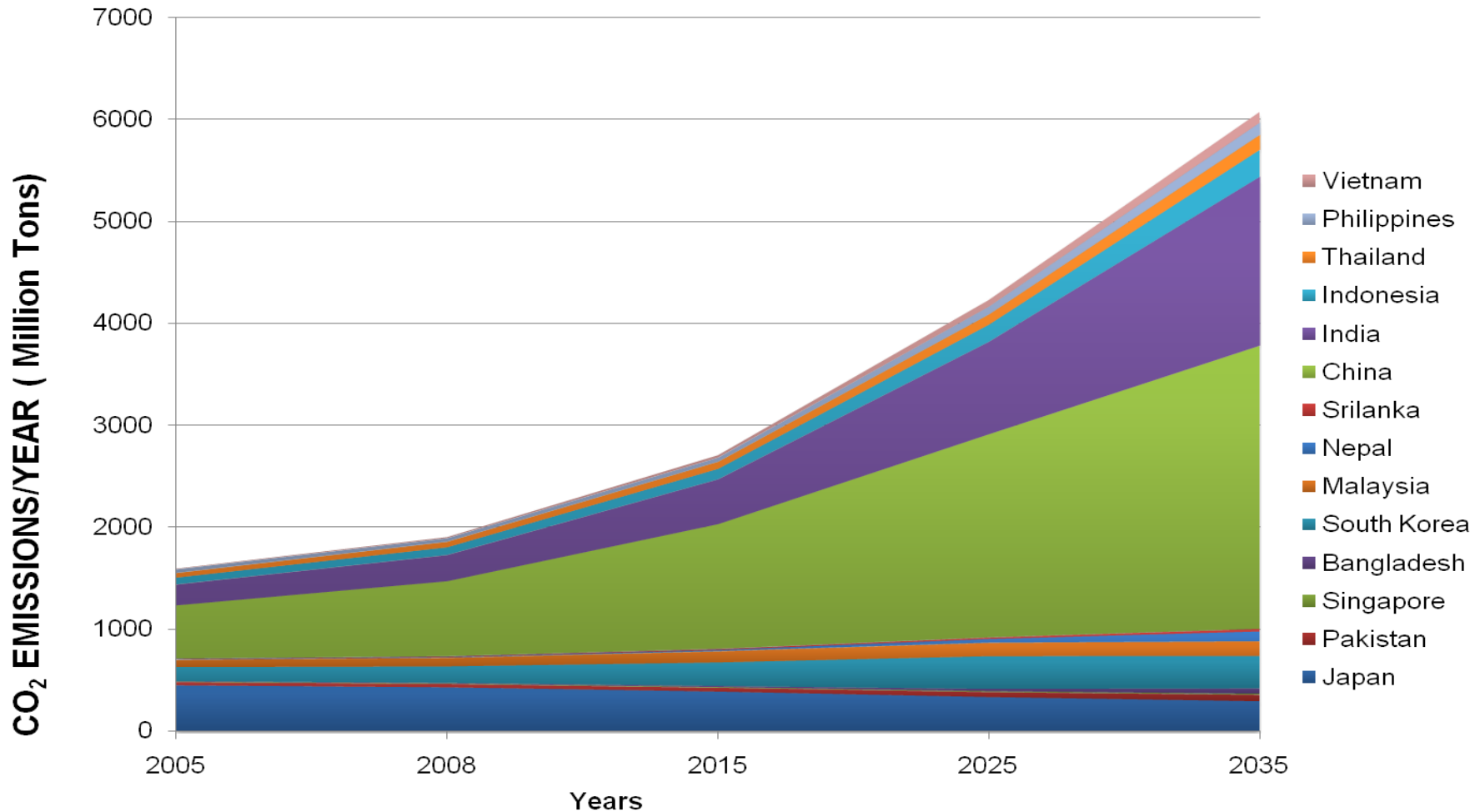
Photo: Cornie Huizenga

Transport CO₂ Share



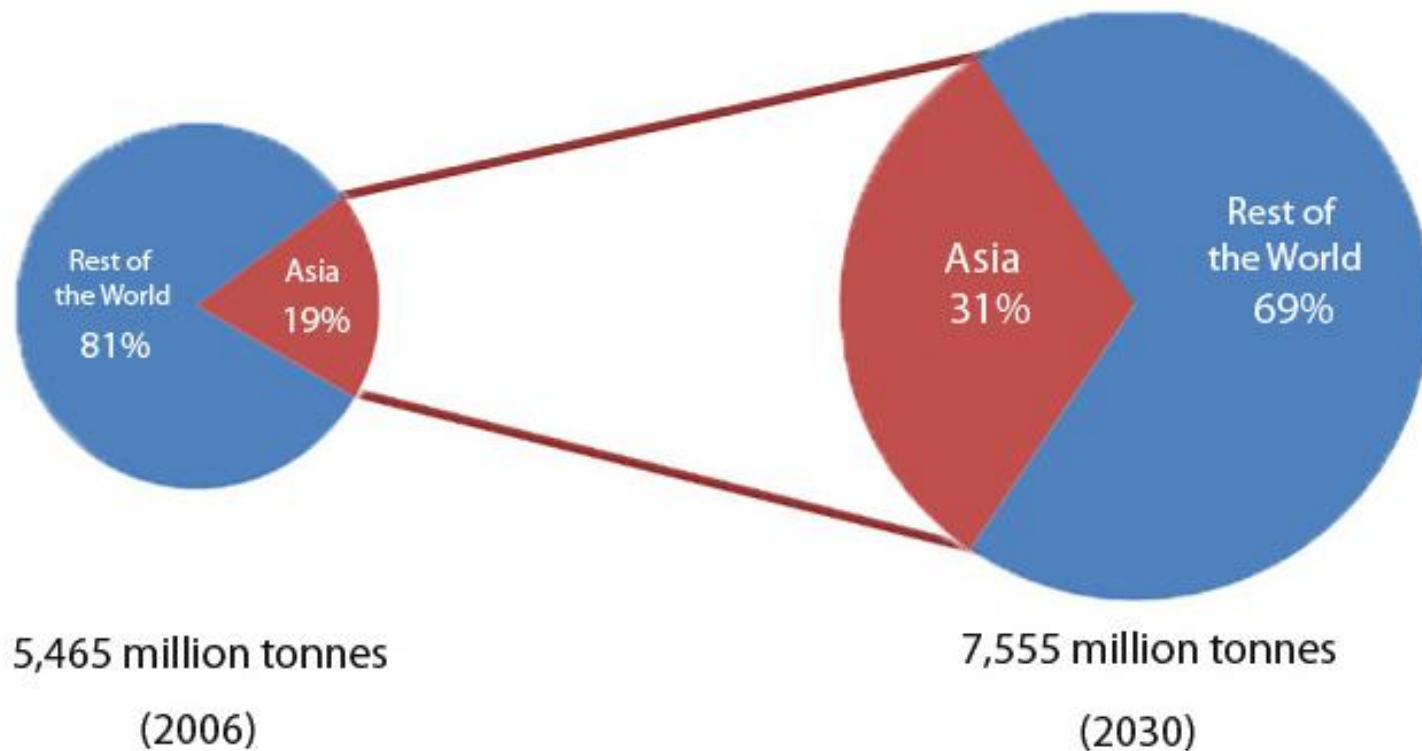
Emissions Database for Global Atmospheric Research (EDGAR), 2008 EC

Growth in Asian Transport CO2 Emissions



CO₂ Transport Emissions

Transport Sector CO₂ Emissions



World Energy Outlook, 2008, IEA

Note: Total Emissions excludes international marine bunkers and international aviation

Transport and Sustainability

- CO₂ 23% from transport sector
- Congestion 2-5% of Asian GDP
- Road safety 2-5% of Asian GDP
- Energy use ~ 30% of World energy
- Fuel security - US\$50-150/barrel
- Local pollution - respiratory health cost
 - Economic development
 - Equitable access
 - Quality of Life

Developed countries

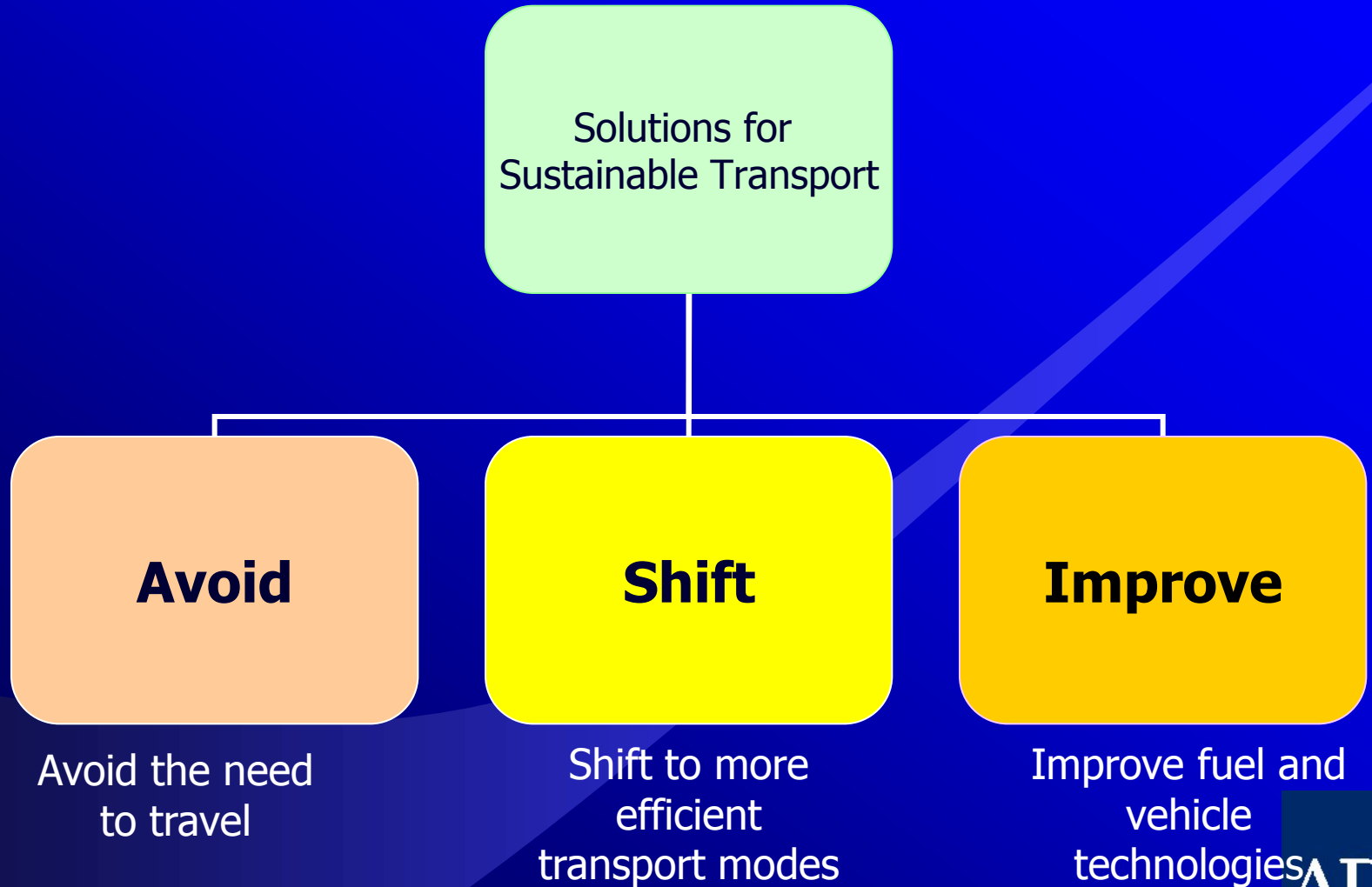
- High baseline CO₂
- Low CO₂ growth
- Dominance of 4-wheelers
- Good data availability
- Strong institutional capacity

Developing Asia countries

- Low baseline CO₂
- High CO₂ growth
- Dominance of 2-wheelers, large PT share and NMT
- Limited data availability
- Weak institutional capacity

Policies for developed and developing countries are not necessarily the same

A Sustainable Transport Solution



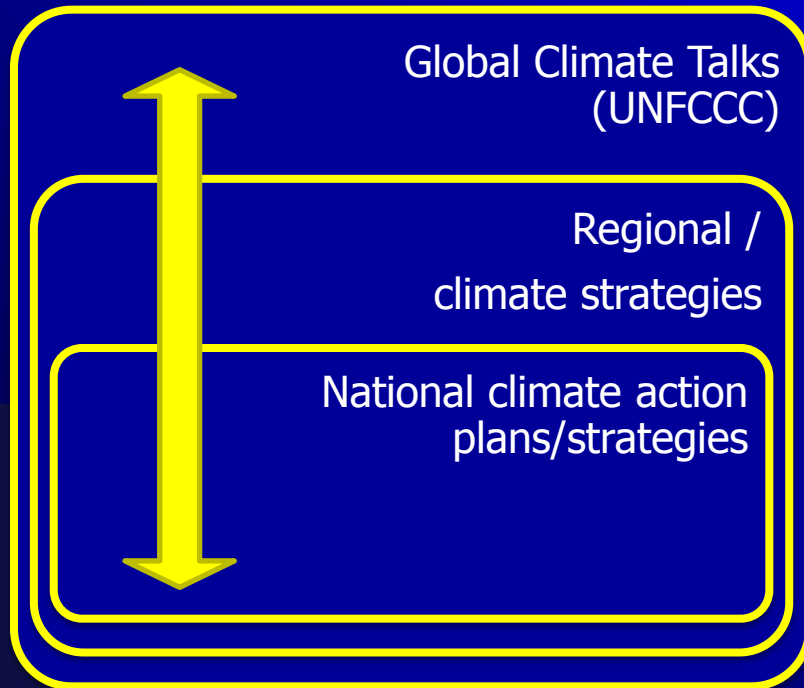
Transport Co-Benefits

| | Pollution | CO ₂ | Congestion |
|--|-----------|-----------------|------------|
| Improve - reduce emissions per kilometer | | | |
| Technology/ vehicle change | +++ | ++ | ? |
| Behavioral change (Fleet mng, driver training) | ++ | + | + |
| Fuel-switch (CNG, LPG, biofuels) | ++ | ? | ? |
| Shift - reduce emissions per unit transported | | | |
| Passenger transport: | | | |
| Mode switch | +++ | ++ | +++ |
| Usage of larger units | + | + | ++ |
| Improved occupation rates | ++ | ++ | ++ |
| Freight transport | ++ | ++ | ++ |
| Avoid - reduce number of trips | | | |
| Land-use – Behavioral change | +++ | +++ | ++ |
| TDM/TOD | ++ | +++ | ++ |

Need for Integration

Sustainable
Development

Climate Policy Processes



Transport Policy Processes



“Our Sustainable Transport Initiative will make more cities more ‘people-friendly’ and advance climate change mitigation objectives.”

Haruhiko Kuroda
President, Asian Development Bank
2009 Delhi Sustainable Development Summit

Thank you

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