Partnership on Sustainable Low Carbon Transport

The Future of Mobility in Asia

Cornie Huizenga

Joint Convener

SLoCaT Partnership

CSE Roundtable on Transport and Climate
18 November, 2009
New Delhi, India

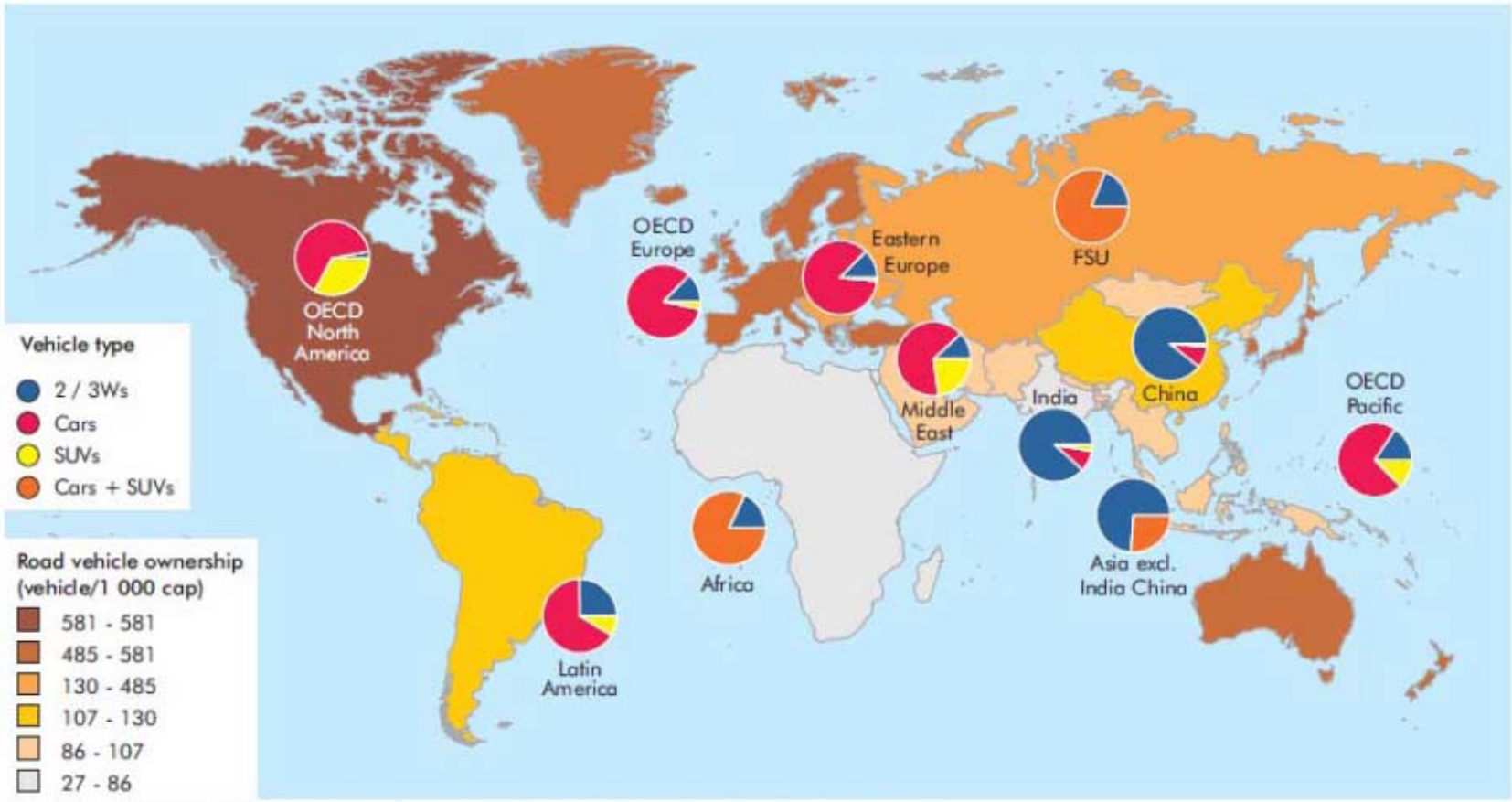
No Smoking – how the world changes!

Partnership on Sustainable Low Carbon Transport

Part 1

WHAT DOES THE FUTURE HOLD?

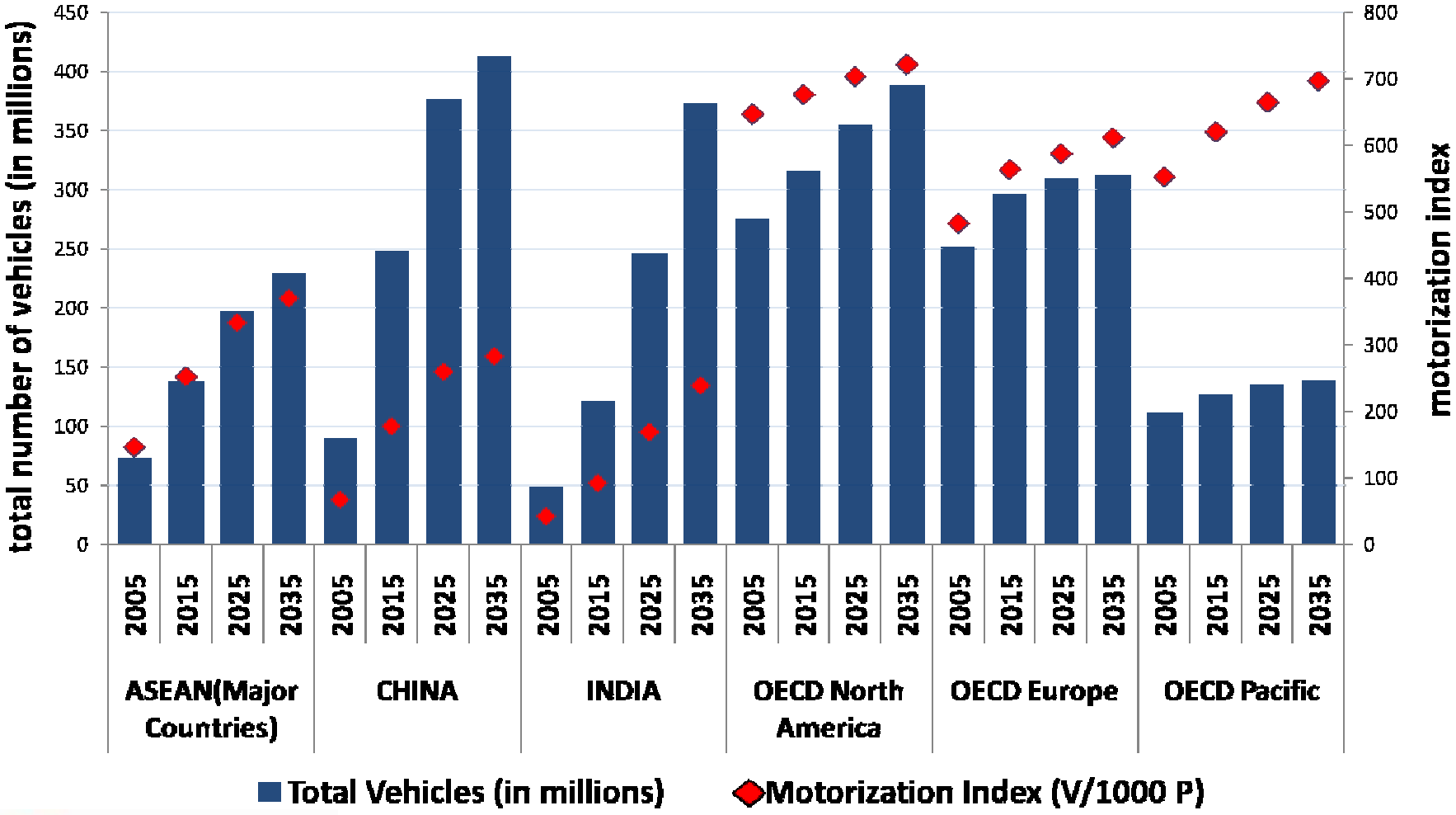
Private Light Duty Vehicle stock, by type and region, 2005



Source: IEA 2009 MoMo Data

Partnership on Sustainable Low Carbon Transport

Explosive motorization growth across Asia



and IEA

Source: 2009 ADB, CAI-Asia, Segment Y LTF and IEA

Electric 2-wheelers in China

- Production from 48,000 in 1998 to 20 million in 2008
- Current estimated fleet: 100 million
- Range: 40-50 km
- Actual max speed: 20-30 km/hr
- Cost: US $200-500

CO2 (g/pax-km)	
Car	102-306
Bus	24.2-96.8
Motorcycle	64-128
Bicycle	4.70
BSEB	15.6-31.2
SSEB	20.2 -40.5

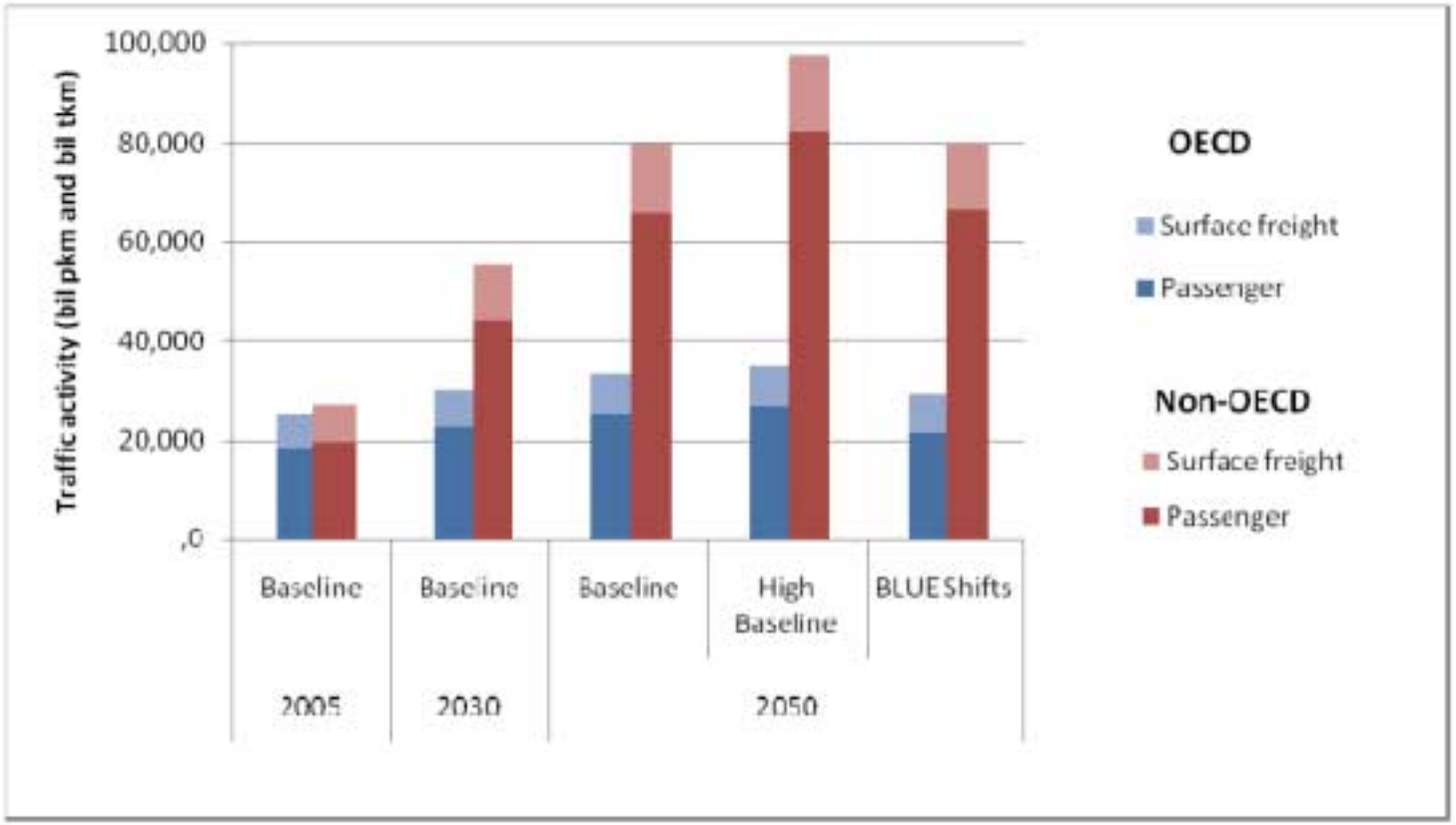
Sources: Cherry and Weinert, 2009

Scooter style electric bike (SSEB)

Bicycle style electric bike (BSEB)

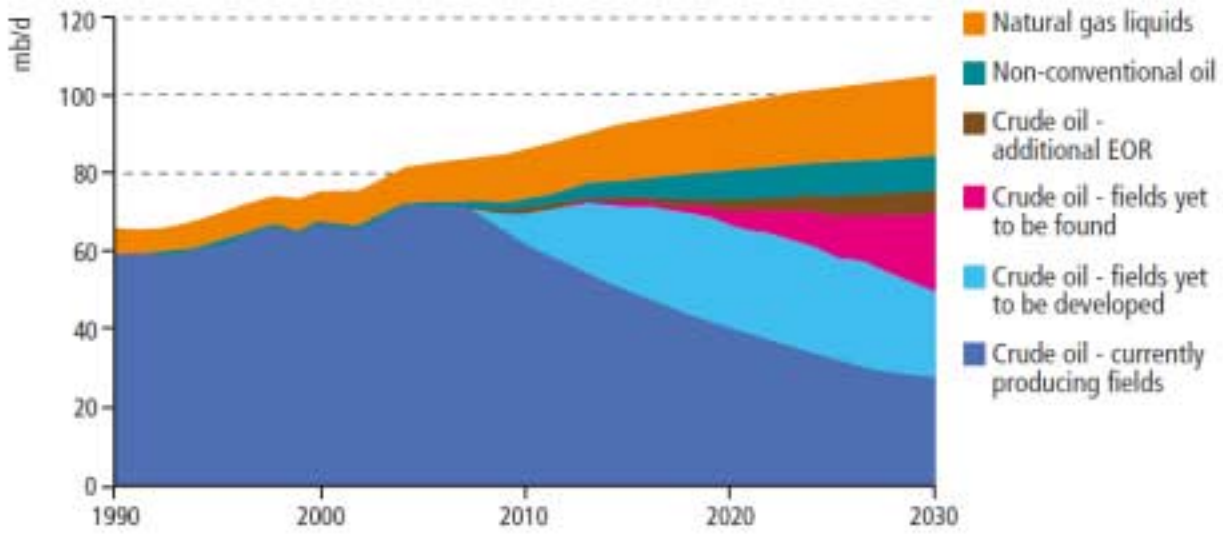
Partnership on Sustainable Low Carbon Transport

Mobility Split by Type of Transport, OECD and Non-OECD



Source: IEA, draft 2009

Peak Oil



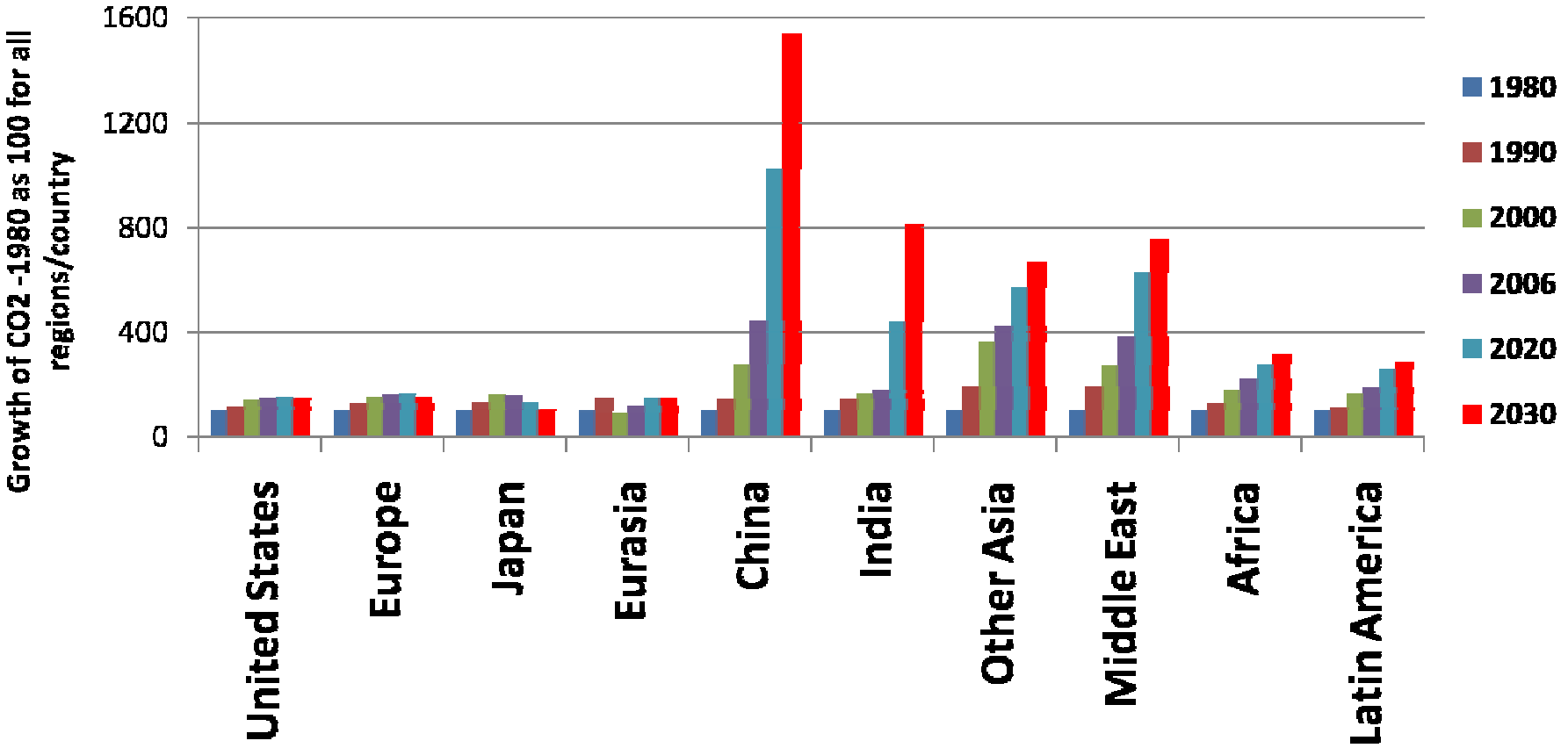
Source: IEA, 2008

"Global oil depletion is well understood, well advanced and imposing increasing constraints on future global oil supply"

Source: UK Energy Research Center, 2009

Partnership on Sustainable Low Carbon Transport

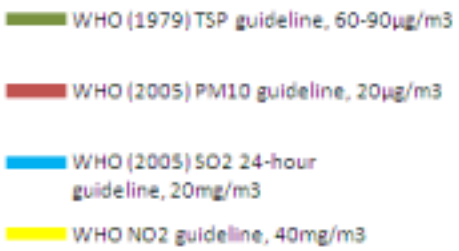
CO2 emissions Transport sector 1980 - 2030

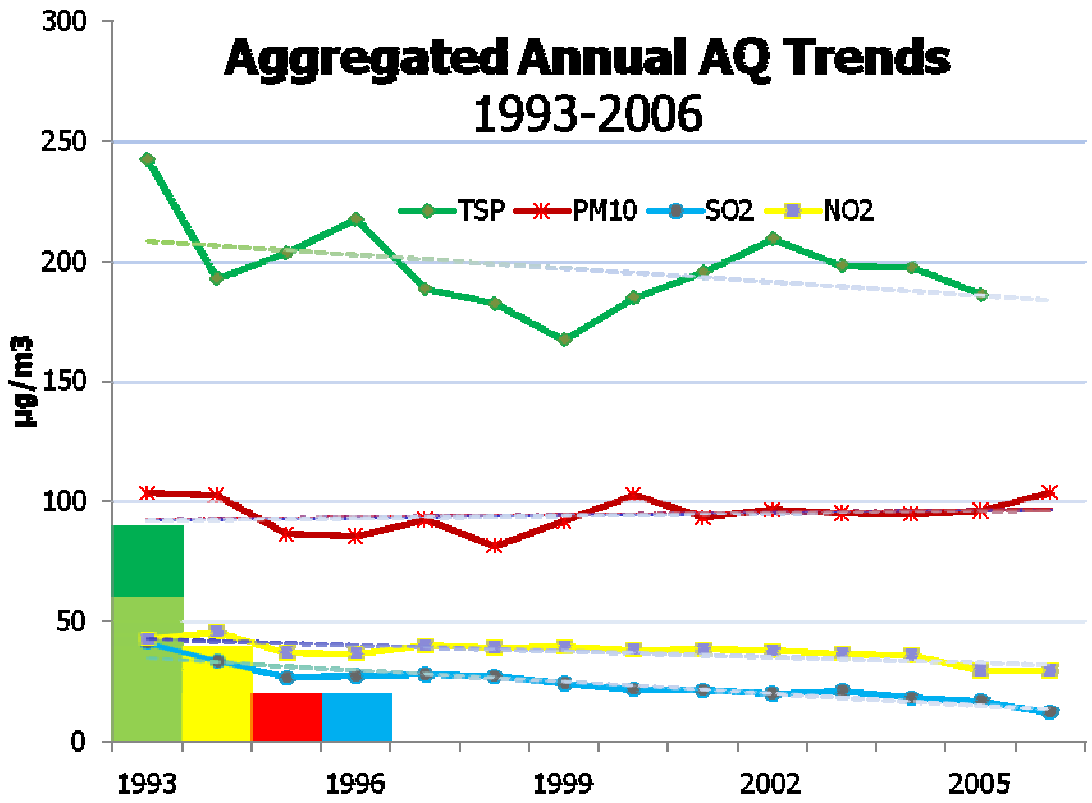


Source: Modified from IEA 2008, World Energy Outlook

Trends Air Pollution 2003-2006

- Air quality in Asia is improving but still far above WHO limits
- PM is main pollutant of concern

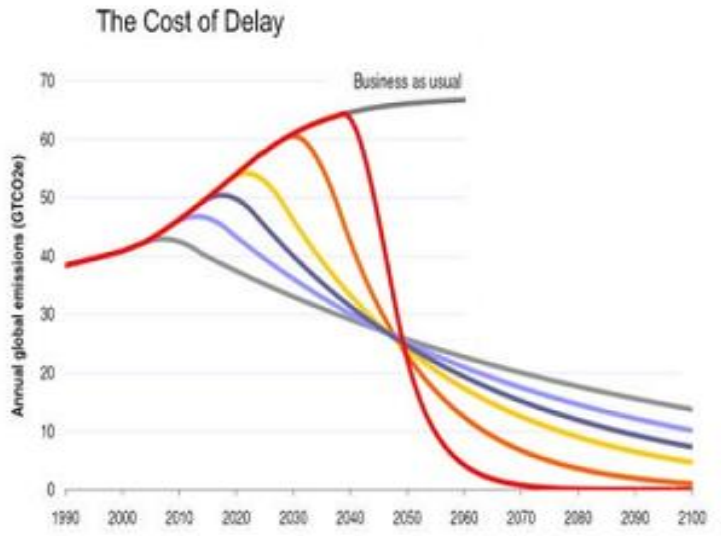




Note: TSP data aggregated from 17 cities; PM10 data from 32 cities; SO_2 data from 31 cities; NO_2 data from 29 cities

Partnership on Sustainable Low Carbon Transport

The Cost of Delay: when do we start?



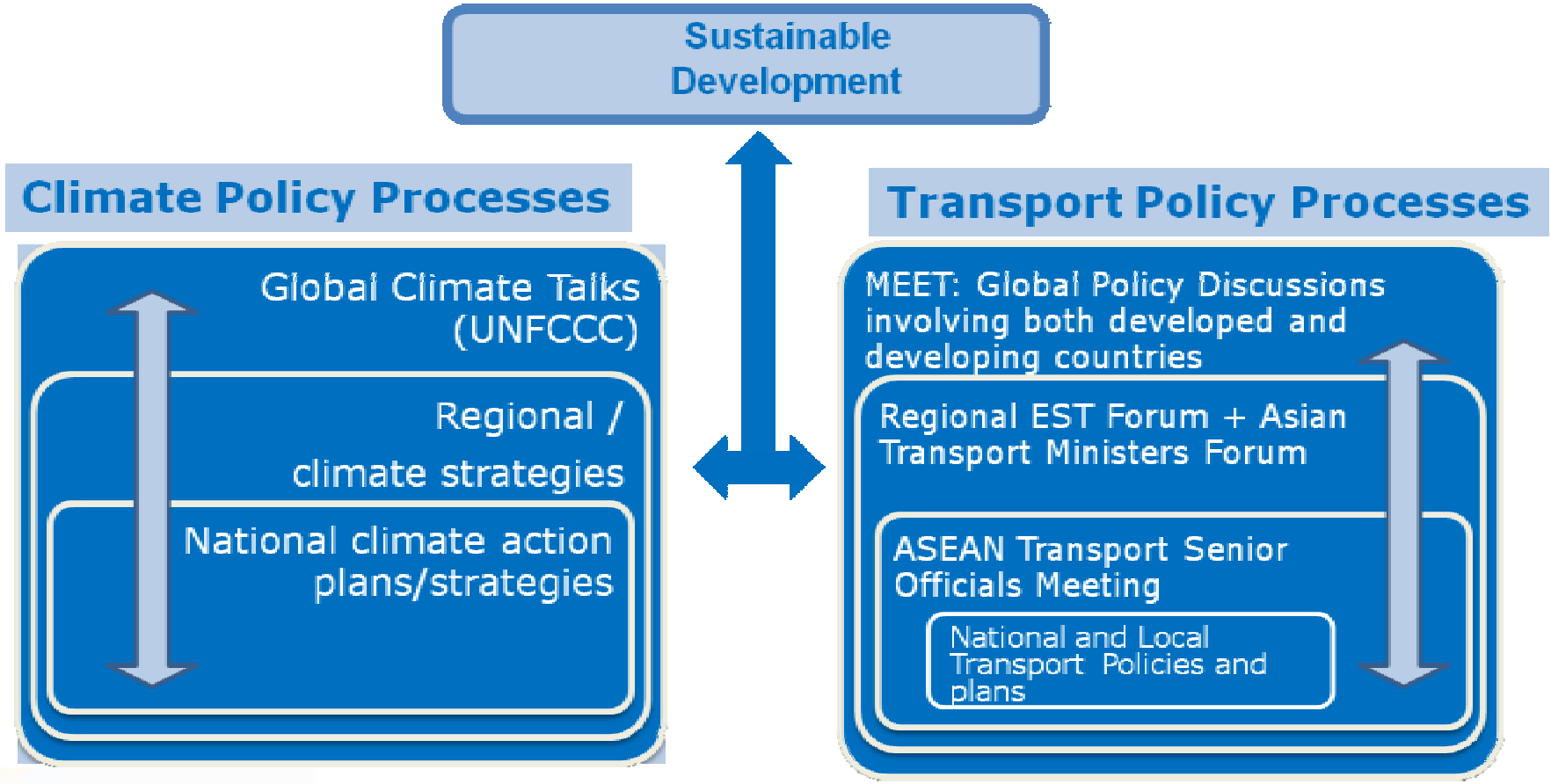
- IPCC calls for 25-40% reduction below 1990 levels by 2020 for developed countries
- CO_2 emissions from fossil fuel consumption will have to be reduced globally by 70-90% compared to 1990 by 2050
- IPCC calls for 15% to 30% reduction in CO_2 emissions below BAU by 2020 as developing country contribution to 2° Celsius scenario

Partnership on Sustainable Low Carbon Transport

Part 5

POLICIES

The Challenge: Integrate *emerging* processes at all Levels



Partnership on Sustainable Low Carbon Transport

Bellagio Principles on Transportation and Climate Change

1. Effective Climate Action is incomplete without addressing the **overall system performance** of the Transport Sector.
2. Climate action in the transport sector should recognize **co-benefits**
3. More Effective Carbon finance mechanisms and associated procedures should **catalyze** sustainable transport policies, programs and projects

Partnership on Sustainable Low Carbon Transport

www.sutp.org/bellagio-declaration

Differences in Policy Basis

Developed Countries

- High baseline
- Low growth
- Dominance 4 wheelers + private transport
- Good data availability
- Strong institutional capacity and regulatory track record
- Carbon Market failure in transport sector

Developing countries

- Low Base line
- High growth
- Dominance 2 wheelers (Asia), large PT share and NMT
- Limited data availability
- Weak institutional capacity and regulatory track record
- Carbon Market absence in transport sector

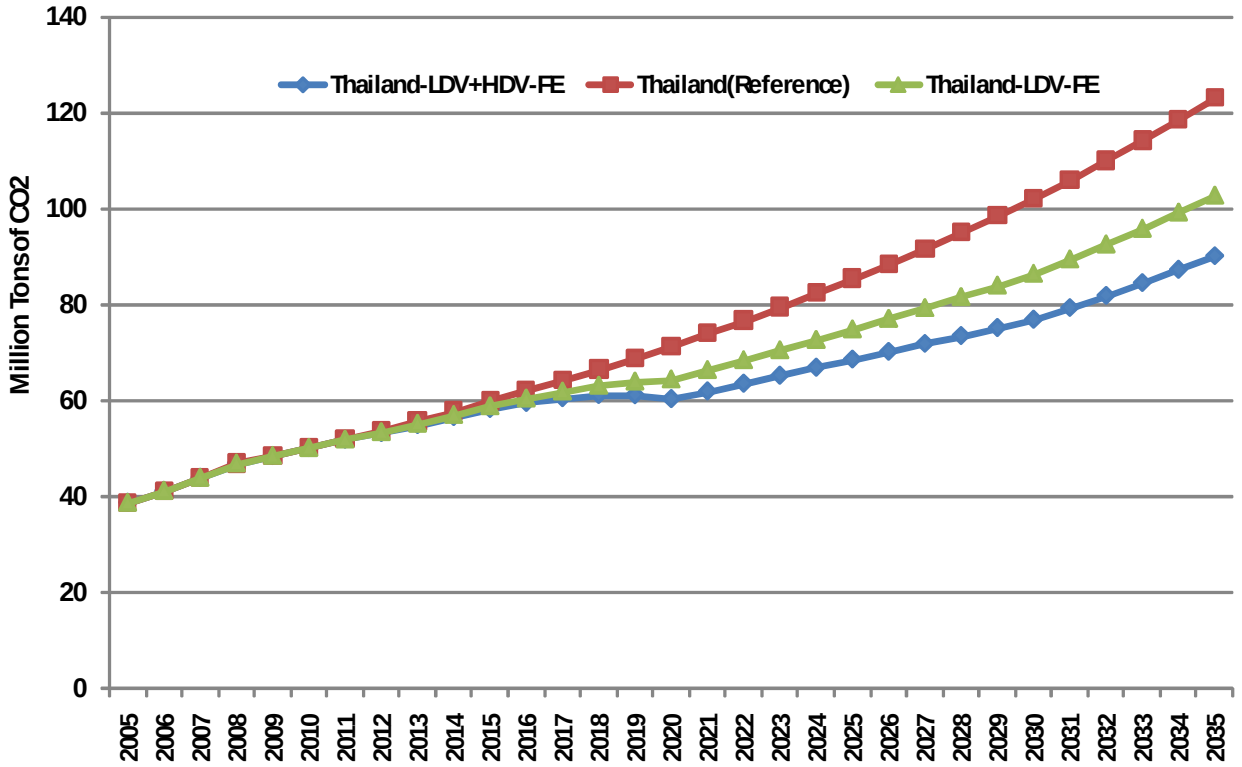
Partnership on Sustainable Low Carbon Transport

Same Principles but different interpretation

Principles	Developed Countries	Developing Countries
Avoid	• Emphasis on reduction of VKT through TDM	• Emphasis on avoiding unnecessary generation of VKT through land use planning, TOD and TDM
Shift	• Shift from private vehicles to NMT and PT	• Prevent shift from NMT and PT to private vehicles
Improve	• Clean up existing vehicles, encourage down scaling vehicle/engine size	• Ensure that future vehicles are as clean as possible, prevent up scaling vehicle/engine size

Partnership on Sustainable Low Carbon Transport

Impact of Fuel Economy measures on Transport CO2 emissions: Thailand

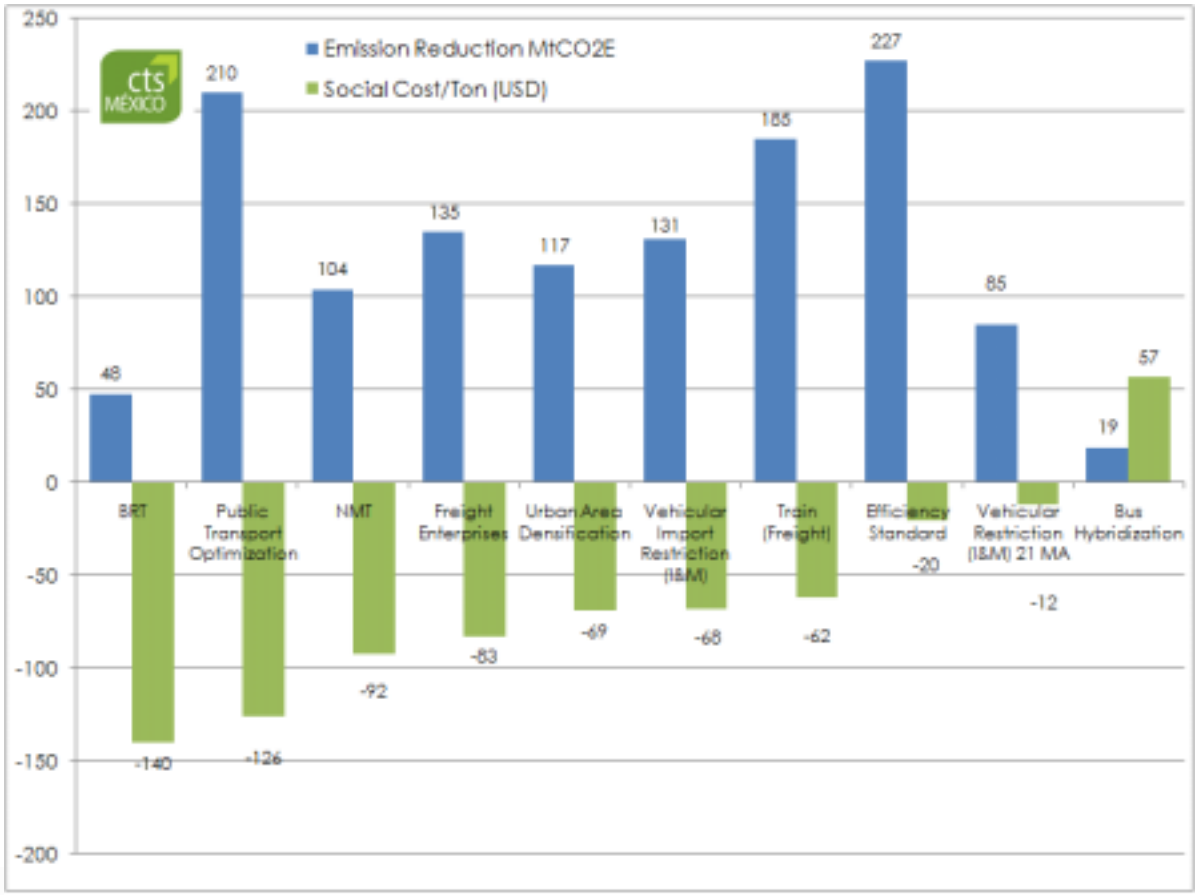


- 2020- 20% improvement in stock average (on-road) efficiency
- 2030- 35% improvement in stock average (on-road) efficiency
- Scenarios – considered for LDV only and LDV + HDV cases

Source : CAI Asia (2009)

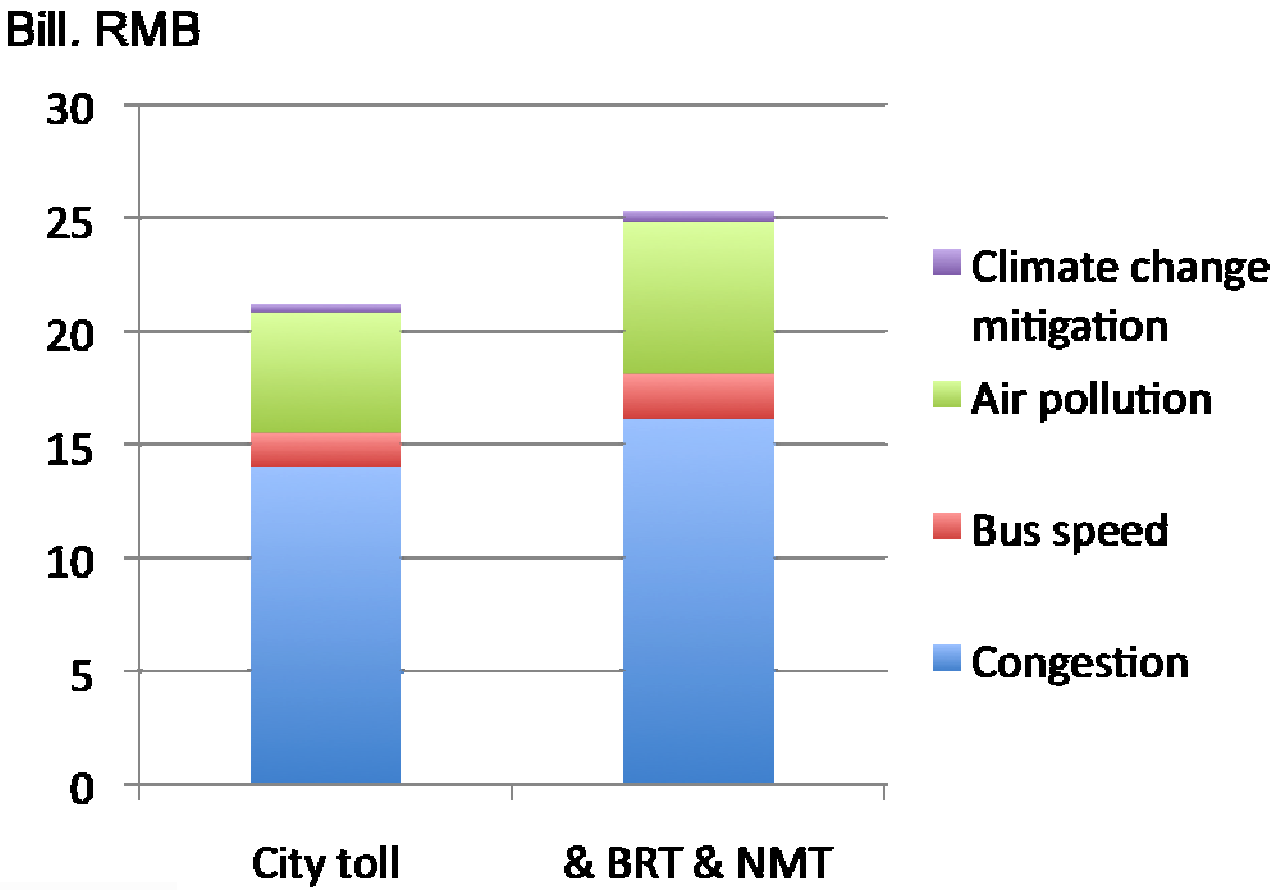
Partnership on Sustainable Low Carbon Transport

Cost effectiveness of transport interventions (Mexico)



Source: Worldbank MEDEC study, 2009

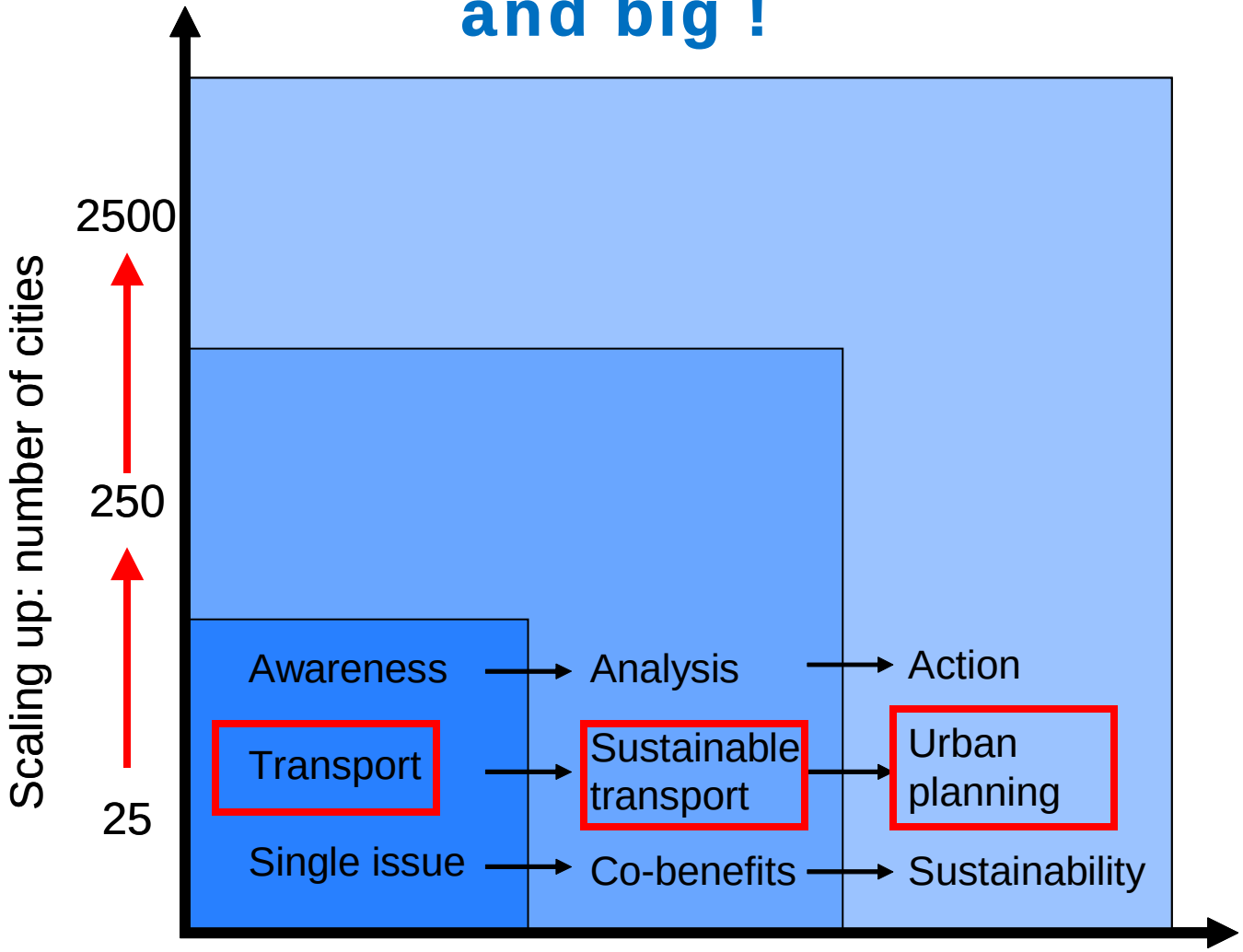
Co-benefits of Transport measures Beijing



Source: Creutzig, Deakin 2009

Partnership on Sustainable Low Carbon Transport

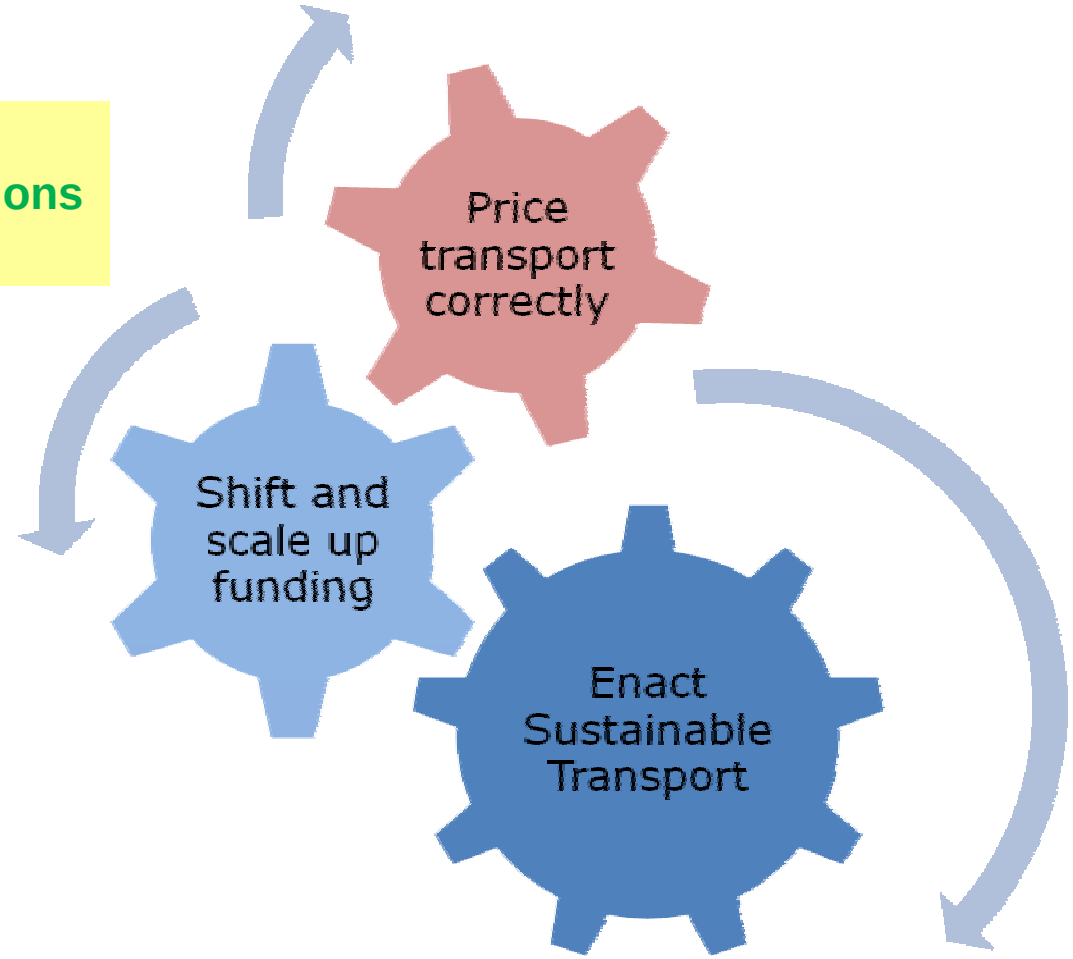
The importance of scale: think integrated and big !



Partnership on Sustainable Low Carbon Transport

Funding Sustainable Low Carbon Transport in developing countries

- **Climate Funds: $ Millions**
- **Development Assistance: $ Billions**
- **Local Investments: $ Trillions**



2500 cities in Asia with more that 100,000 persons

Partnership on Sustainable Low Carbon Transport

Integrate Policy, Financing and Monitoring

- India National Urban Transport Policy sets the direction
- JNURM Financing provides funding
  - Investments, if in line with Urban Transport Policy
  - Institutional conditionalities to support investments
- Benchmarking of Urban Transport Systems to measure progress

Partnership on Sustainable Low Carbon Transport

What kind of Cities do we want to live in?

Partnership on Sustainable Low Carbon Transport

Bus Rapid Transit systems in Asia

Seoul, Korea

Before **After**

Partnership on Sustainable Low Carbon Transport

Delhi, India

MCD junks underpasses, flyovers near Civic Centre

PRO-HERITAGE Civic body approves alternative traffic plan around its new HQ

Nivedita Khandekar

NEW DELHI: The Municipal Corporation of Delhi (MCD) on Sunday gave the go-ahead for a new traffic circulation plan around the Civic Centre.

The plan lays emphasis on "equitable distribution" of road space around the new MCD headquarters.

The highlights of the new plan are all surface-level roads (and no flyovers), exclusive bus lanes, wider footpaths and ample scope for public transport.

The approval comes more than a month after the MCD first thought of "re-aligning" the traffic circulation pattern in the heart of Delhi to avoid separation of the Walled City from New Delhi.

MCD commissioner K.S. Mehra confirmed that the plan proposed by the Indian National Trust for Art and Cultural Heritage (INTACH) had been approved.

"The plan was given the final go-ahead in today's meeting and we are expecting to draw it up properly before June 2010 so that we are able to start work on the redevelopment of the Walled City," Mehra said.

There are several heritage monuments lining the roads surrounding the Civic Centre — Turkman Gate and Ajmeri Gate to name just two.

The earlier plan did not at all consider the fact that the area across the Aruna Asaf Ali Road is the heritage city Shahjahanabad.

Appreciating it as a "paradigm change" in the civic body's approach, INTACH Delhi chapter convenor A.G.K. Menon said: "All over the world, planners are going for 'people-oriented' ways rather than 'car-oriented'. With this plan, we are seeking to re-writing the history by which the British had wedged a divide between the old and the new Delhi."

The plan aims to integrate the Walled City area with the rest of the city, right up to the Connaught Place, he said.

"We have focused on three aspects — traffic should be slow, encouraging public transport and looking at congestion as a solution and not a problem," Menon said.

HIGHLIGHTS OF THE NEW PLAN

There will be ample space for traffic, walkers.

- No flyovers, no underpasses
- Only surface level roads
- Equitable distribution of road space
- Exclusive/segregated bus lanes
- Iconic public transport system complete with modern tramway system, small-scale battery operated vehicles and pedicabs
- Arterial roads, distributors and access roads on all sides of the civic centre
- Segregated lanes for pedestrians, motorized vehicles and non-motorized vehicles

For more information:

Cornie Huizenga
Joint Convener
Partnership on Sustainable Low Carbon Transport

cornie.huizenga@slocatpartnership.org