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**Final Symposium for the Study of Long-Term Transport
Action Plan for ASEAN – Tokyo 20th February 2014**



Future Visioning for Sustainable Mobility in ASEAN Countries

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The Growth in ASEAN Cities



2013 – Urban Area

Jakarta	28 million
Manila	21 million
Bangkok	8.3 million
Ho Chi Minh City	8.2 million
Singapore	5.4 million

About 50% of population live in urban areas – and 36% of these (64 million) are vulnerable to flooding (ADB, 2012)

Four Mega Cities by 2025



**PLANNING AND DESIGN FOR
SUSTAINABLE URBAN MOBILITY**

GLOBAL REPORT ON HUMAN SETTLEMENTS 2013



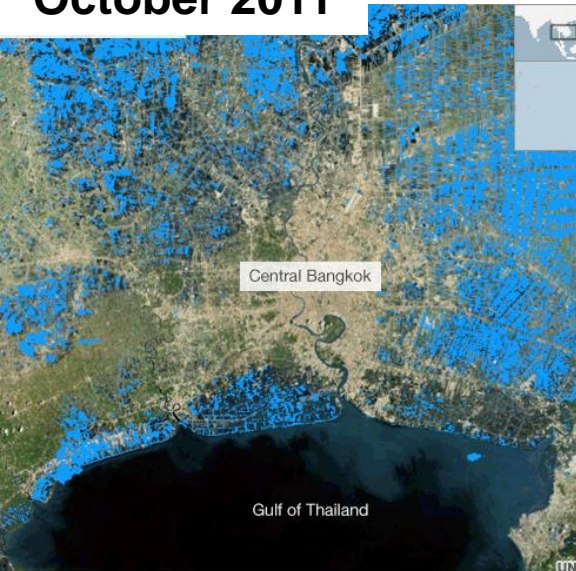
UN HABITAT
FOR A BETTER URBAN FUTURE

Cities and Climate Change



Vulnerable Cities – 40% world cities and 20/29 mega cities (>10 m) coastal – storm surges, flooding, wind and high intensity/frequency events.

October 2011



“Nock-ten” tropical storm - flooding +3m. Pathum Thani on the outskirts of Bangkok (centre for Hard Disk Drives) + Don Muang Airport (Thailand’s 2nd airport). 800 deaths and 13.6 million affected – cost \$46B





The Growth in Mobility and CO₂ Emissions



Passenger kilometres per person	1950	2005	2050
	Pkm/pers	Pkm/pers	Pkm/pers
Developing economies	388	3660	10000
World	1420	6020	14000

2010: 825m cars and 70% in developed countries (1047m vehicles)

**2035: 1600m vehicles
2050: 2100m vehicles**

Source: Based on Schafer et al. (2009)

2009 Totals = MtCO ₂ Per capita = tCO ₂	Total CO ₂ emissions		Transport CO ₂ emissions		% total emissions
	Total	Per capita	Total	Per capita	
World	29,000	4,29	6,544	0.968	22.6
Asia (ex China)	3,153	1.43	492	0.223	15.6
China	6,877	5.14	476	0.356	6.9

Note: Vehicles include cars, SUVs, buses, freight vehicles – but not two-three wheelers



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Visioning the Future

City Visions – Normative and Desirable Futures

Trend Breaking views on the City in 2050

Viability – Economic sustainability

Vitality – Environmental and health

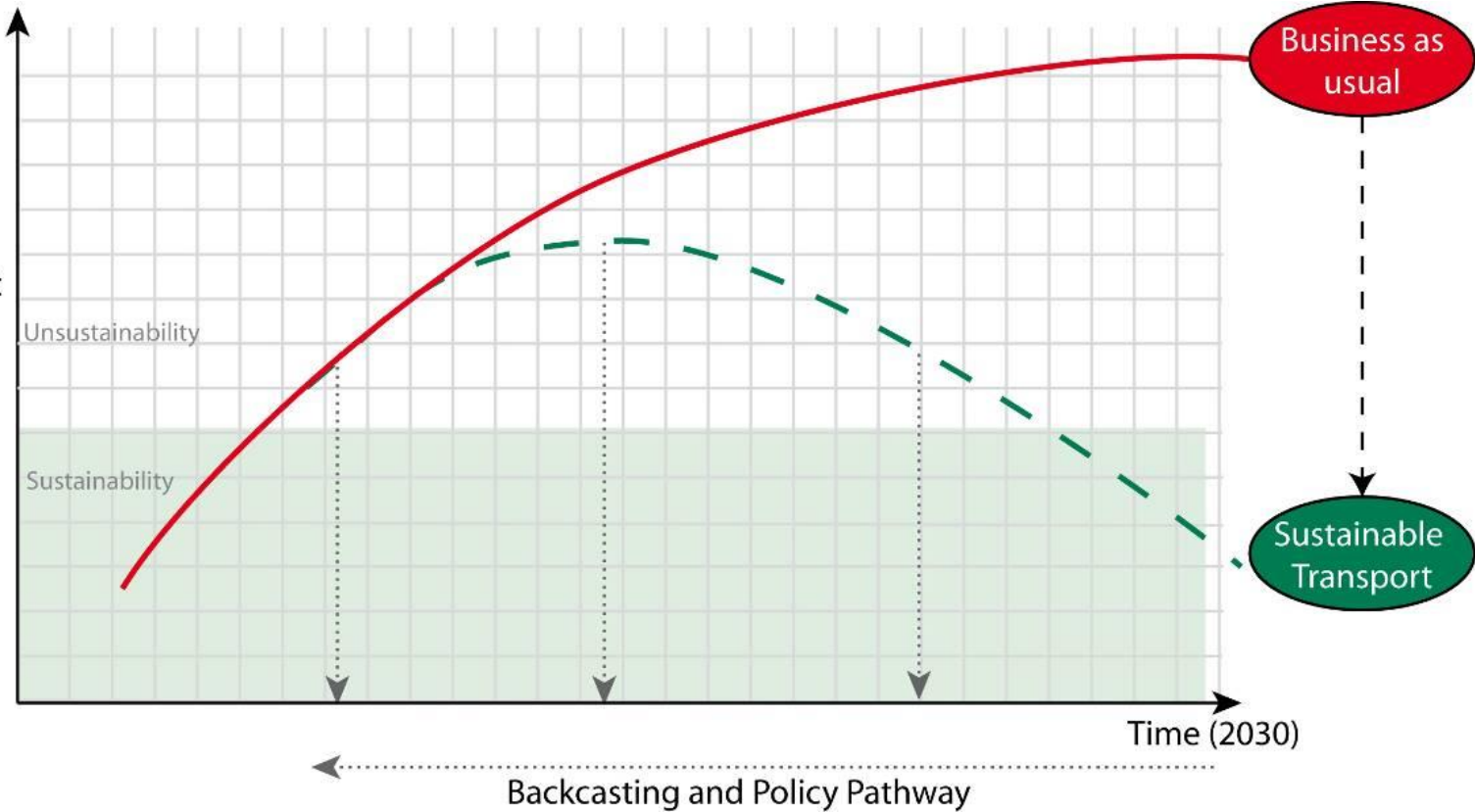
Vibrancy - Social and cultural sustainability



Backcasting Methodology

Multi-Criteria
Sustainability
Impact

- accessibility
- CO₂
- local environment
- economy
- safety



5 Stages

1. **Baseline and projection**
2. **Alternative visions of the future**
3. **Policy measures and packages available**
4. **Appraisal, costing, optimum pathways**
5. **Conclusions – policy recommendations**



Resilient and Flexible Infrastructure for Cities



1. Investment in low carbon transport – walk, cycle and public transport – reduce transport's CO₂ impact
2. Capacity management – making the best use of available supply of infrastructure – and efficiency in the operation of the system
3. Demand management – pricing and regulation on all forms of transport
4. Mode management – promote the more efficient forms of transport – walk and cycle, public transport, rail – best available technology
5. Organisational and governance structures – to handle emergencies – links between agencies and responsible parties



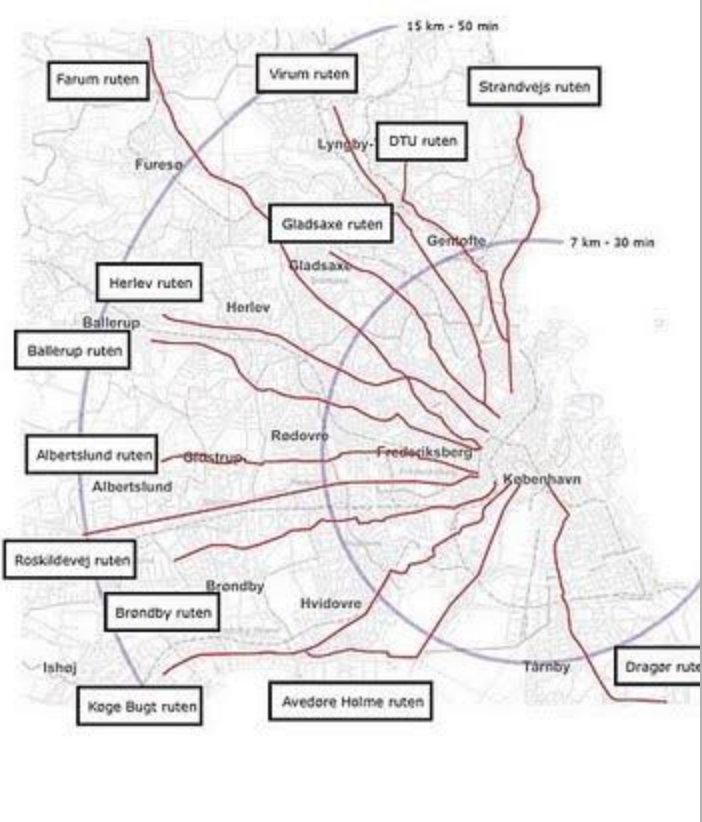
Copenhagen: Carbon neutral by 2025

68% of residents cycle >1 per week

90% think the city is a good place for cyclists

Cyclists seriously injured have fallen by >60% since 1996

Benefits = speed, convenience, health costs





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PLANNING AND DESIGN FOR SUSTAINABLE URBAN MOBILITY

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Conclusions: Towards Sustainable Urban Mobility

1. The configuration of cities . . . has been highly influenced by the dominance of private transport infrastructure, facilities and services;
2. Value generation through accessibility has not been optimally utilized in many cities of . . . developed and developing countries;
3. Urban mobility is finely woven into the spatial, social, economic, political and environmental fabric of cities;
4. Travel is a ‘derived demand’ – shifts focus to people and places – and not travel itself;



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PLANNING AND DESIGN FOR SUSTAINABLE URBAN MOBILITY

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Conclusions: Towards Sustainable Urban Mobility

5. Accessible cities places opportunities closer to each other – and provides safe and efficient pedestrian and cycling corridors – with affordable and high quality public transport options;
6. Urban policy strengthens the links between land use and transport – this means a focus on enabling mobility and reducing distance travelled in cities;
7. Priority for funding non motorised and high capacity public transport infrastructure;
8. Need for strong institutional and governance structure to oversee effective implementation