1. Introduction

Transport is a major source of carbon-based fuels, and is increasingly being highlighted as the sector which contributes least to CO2 emission reduction targets. This paper reports on the findings of a recent IAMC (Imperial and Birkbeck for Transport) seminar on issues within that and explains the role of the transport sector in reducing CO2 emissions in urban contexts. The case studies discussed are in London, Delhi, and Asia (Dhaka, India). The analysis considers the carbon objectives for transport CO2 reduction, but the very different baselines, targets and pathways towards sustainability.

Strategic direction:

• A peak in emissions within 10 years.
• Global reduction in CO2 emissions of 60% from 1990 levels by 2050.
• Developed countries: an 80% reduction in CO2 emissions in 2050 levels; 10% per capita per annum – by 2030 (6) has this as a target – Climate Change (6).
• Delays: transport accounts for 25% of CO2 emissions – aiming for 0.5 tonnes per capita within transport.
• Human: easy access to poor country’s budget for all, costing andU.S. - some carbon constraints.

2. Case Study: London

Objective: mapping the pathways towards reducing the projected growth in CO2 emissions in the transport sector in London by 2030 and 2050

Potential Scenarios

• BAU 2030: This future is an extension of existing trends over the next 20 years - some investment in public transport, limited change in the efficiency of the car stock and in the use of alternative fuels, but no coherent strategy for accelerated change.
• Scenario 1: Lower carbon driving: A strong and successful push on technological innovation, including low emission vehicles, alternative fuels and smaller vehicle types. Seeks an approx. 50% increase in CO2 emissions on 1990 levels (BAU) to 2030.
• Scenario 2: Sustainable future: This scenario combines the best technological and behavioural application of existing technologies - urban transport, walking and cycling, smarter choice, public transport, etc. - and select variable levels of application to help achieve 40% reduction in transport CO2 emissions, on 1990 levels. It is very optimistic about levels of application of policy levers.

3. Case Study: Delhi

Objective: mapping the pathways towards reducing the projected growth in CO2 emissions in the transport sector in Delhi by 2030 and 2050

Potential Scenarios

• Scenario 1: Lower carbon driving: Seeks an approx. 40% reduction in transport CO2 emissions, on 1990 levels. However, this is reliant on an ambitious implementation of technological measures that envision electric vehicles and alternative fuels – 50% CO2.
• Scenario 2: Sustainable future: This scenario combines the best technological and behavioural application of existing technologies and select variable levels of application to help achieve 40% reduction in transport CO2 emissions, on 1990 levels. It is very optimistic about levels of application of policy levers.

4. Conclusions

Different packages of measures are selected for each city consistent with equitable, low-depth/density/emission reduction objectives. London can deliver deep-sea transport improvement to on current transport CO2 emission levels. Delhi can achieve the huge projected levels in transport CO2 emissions, if existing travel trends are continued.

Role:

• BAU 2030: This future is an extension of existing trends over the next 20 years - some investment in public transport, limited change in the efficiency of the car stock and in the use of alternative fuels, but no coherent strategy for accelerated change.
• Scenario 1: Lower carbon driving: Seeks an approx. 50% reduction in transport CO2 emissions, on 1990 levels (BAU) to 2030.
• Scenario 2: Sustainable future: This scenario combines the best technological and behavioural application of existing technologies - urban transport, walking and cycling, smarter choice, public transport, etc. - and select variable levels of application to help achieve 40% reduction in transport CO2 emissions, on 1990 levels. It is very optimistic about levels of application of policy levers.

5. References

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