




Transport and Climate Change
Mr. Philippe Crist, Joint Research Centre of the International Transport Forum and the Organisation for Economic Co-operation and Development



The International Transport Forum

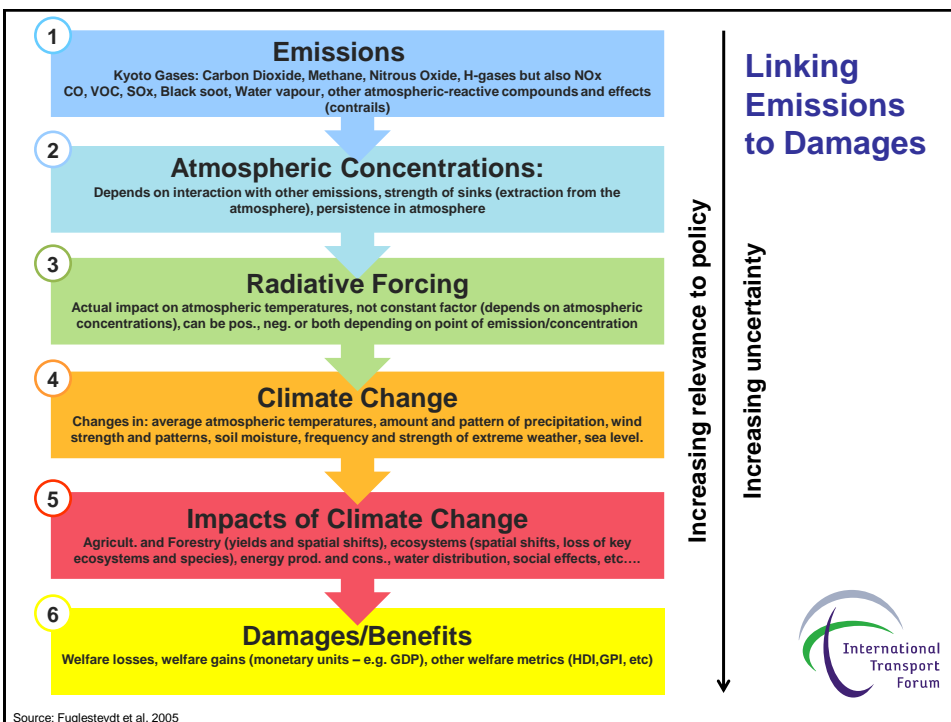
- A global platform for transport, logistics, mobility
- A meeting place for the transport sector at the highest level
- A forum run by governments, open to business, research and civil society
- 51 Countries

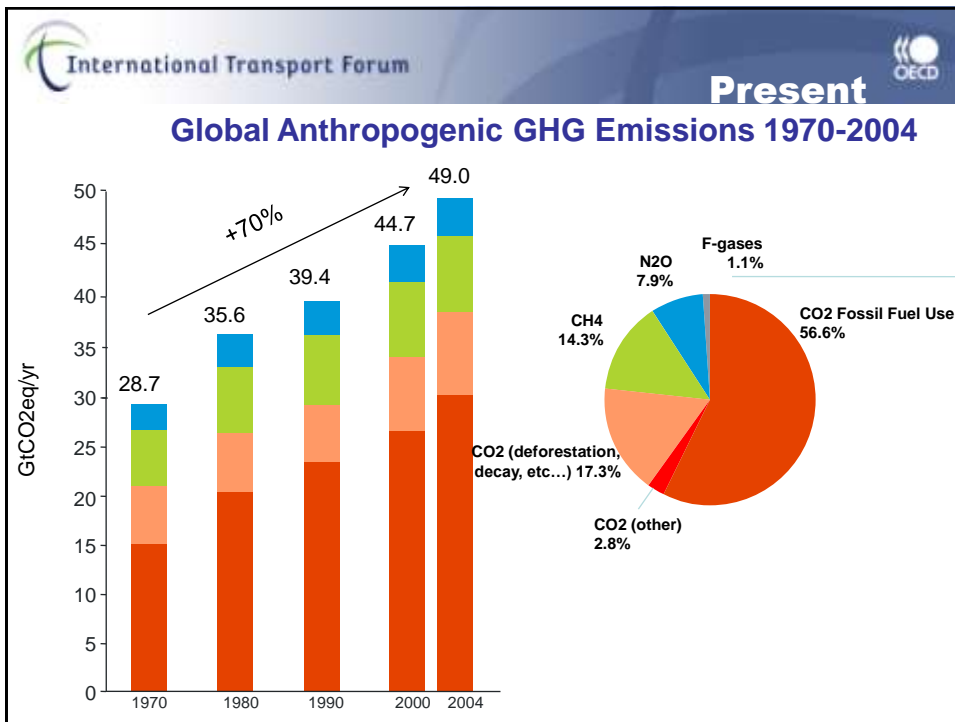
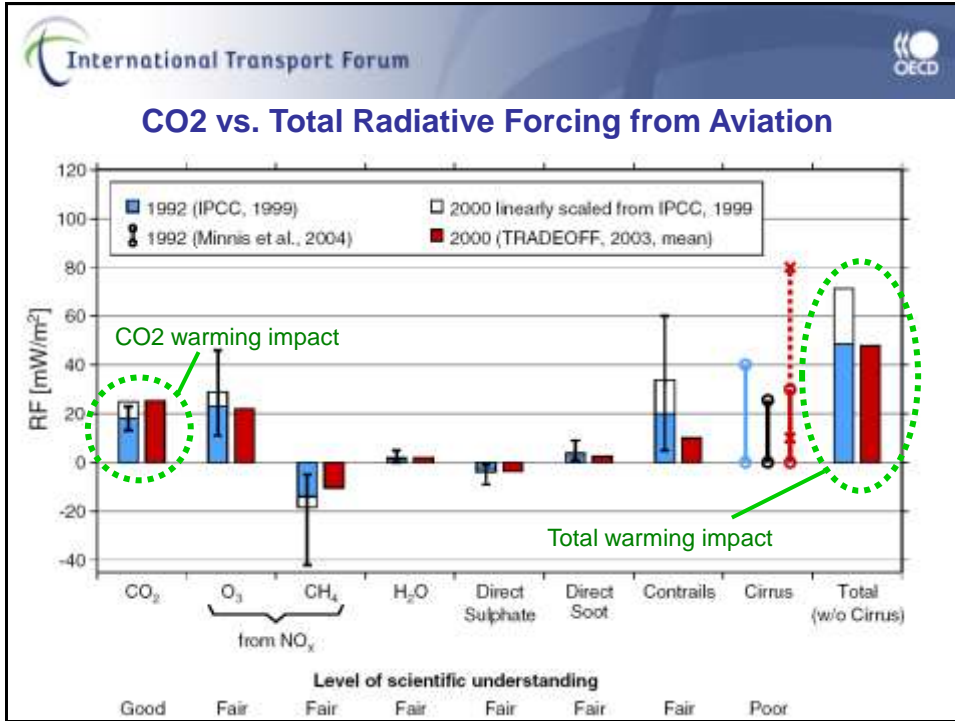


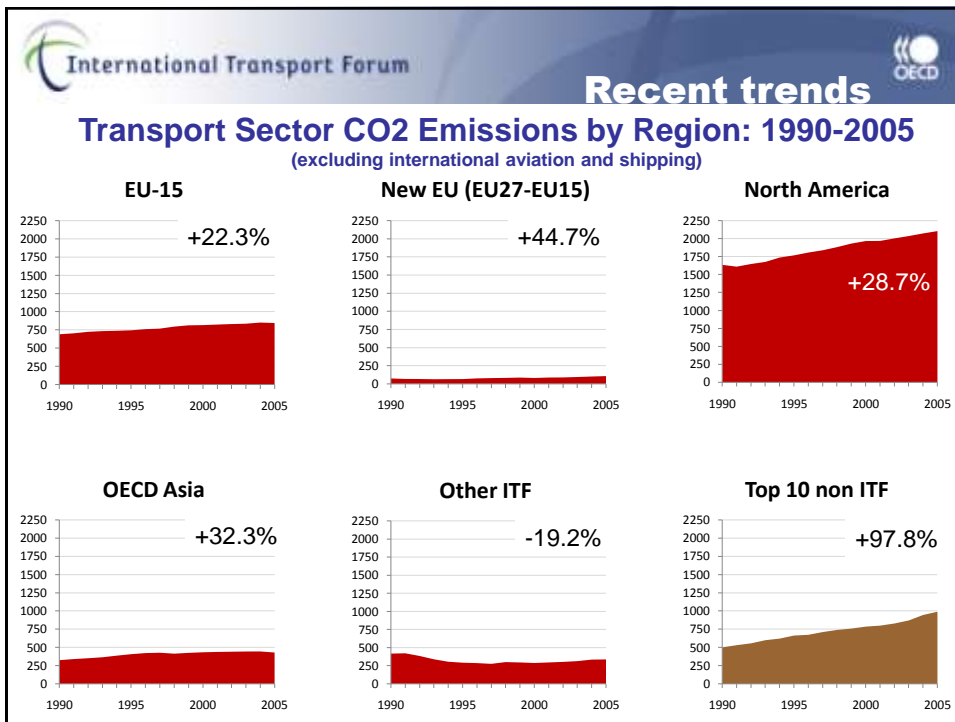
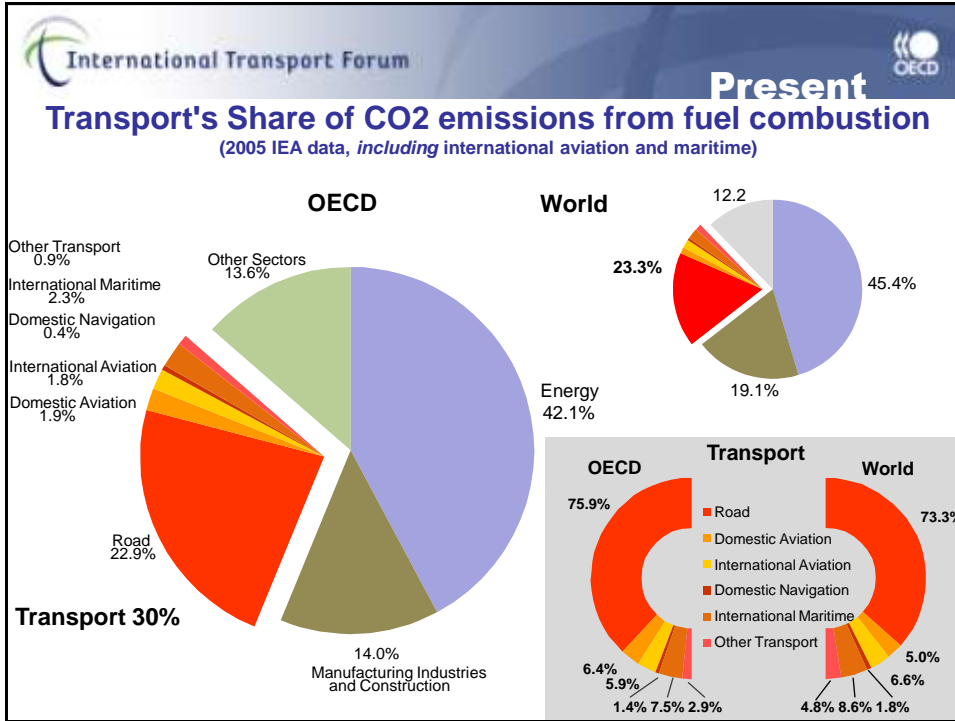
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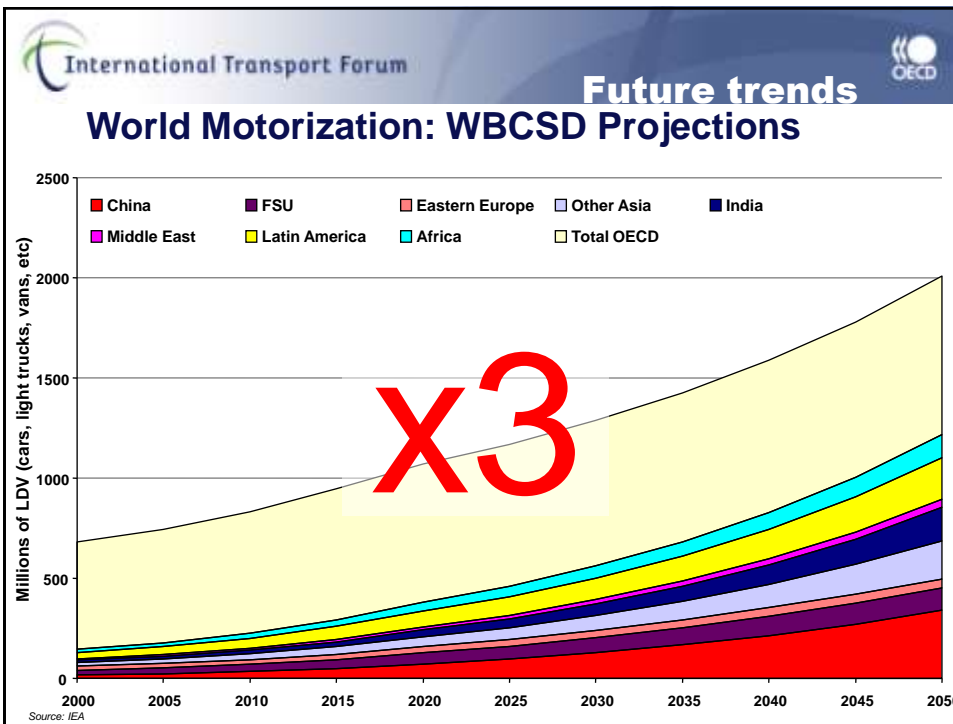
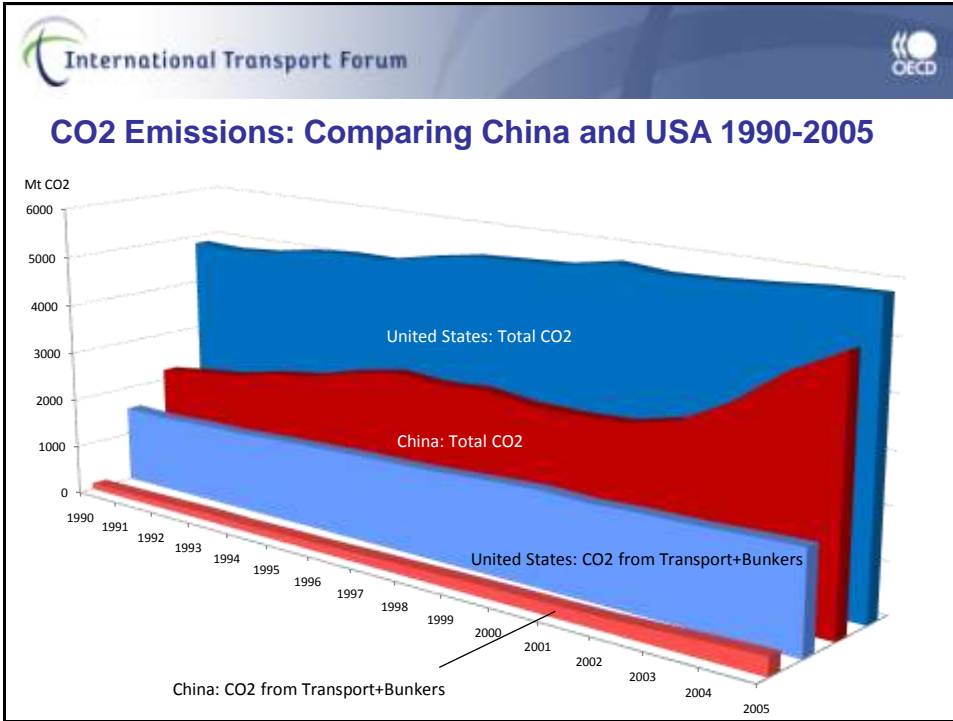
Outline

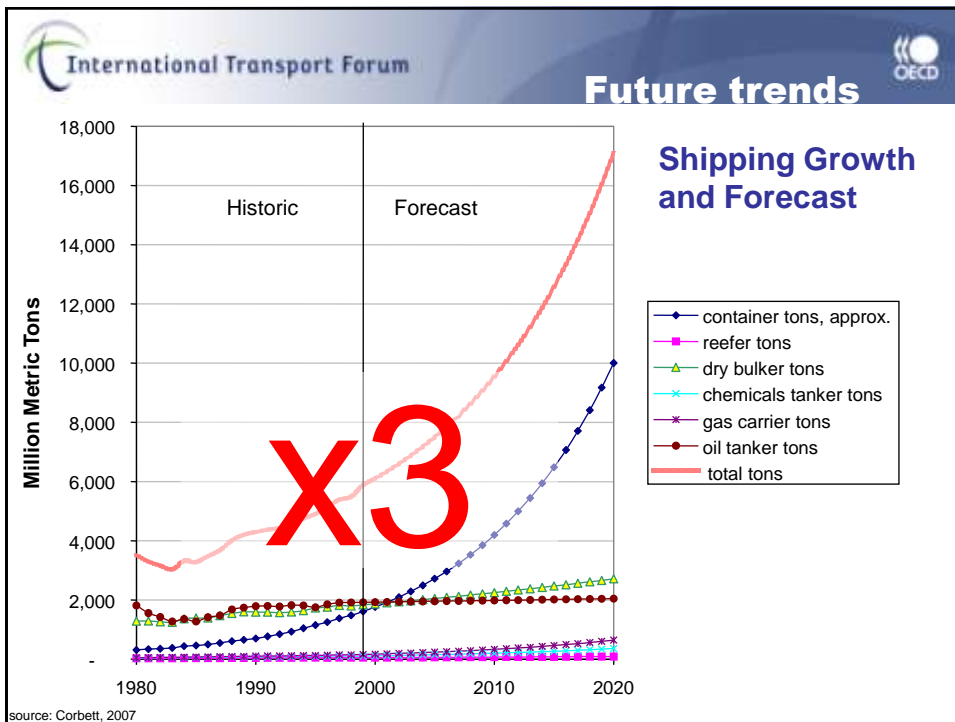
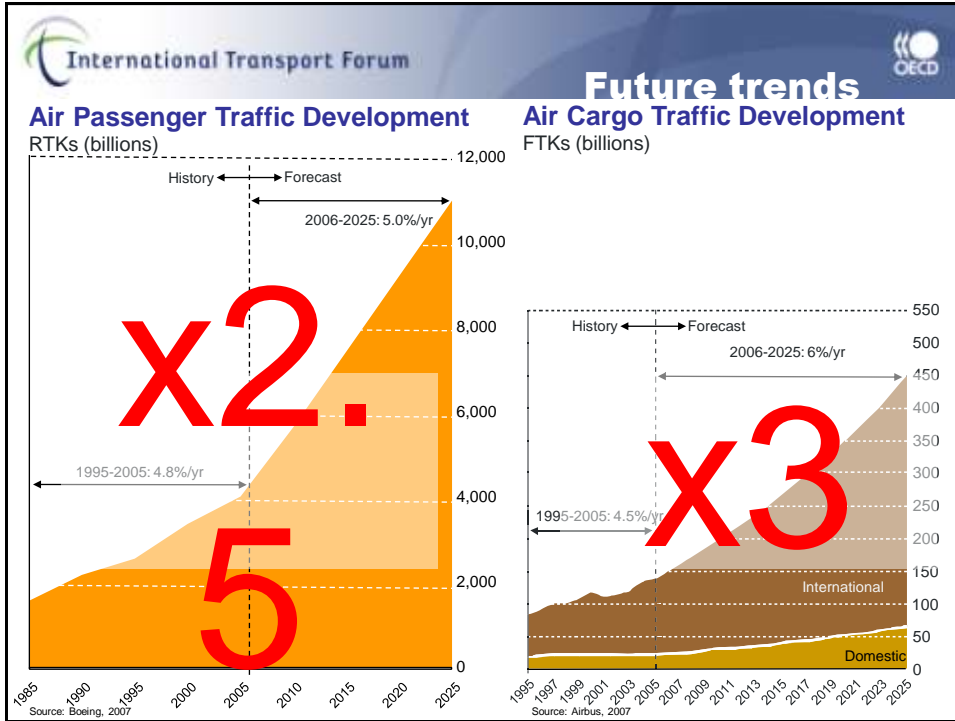
- “Mind the Gap”: GHG Trends in the Transport Sector
- Which Policies at What Cost?
- Transport Policy Implications and Priorities

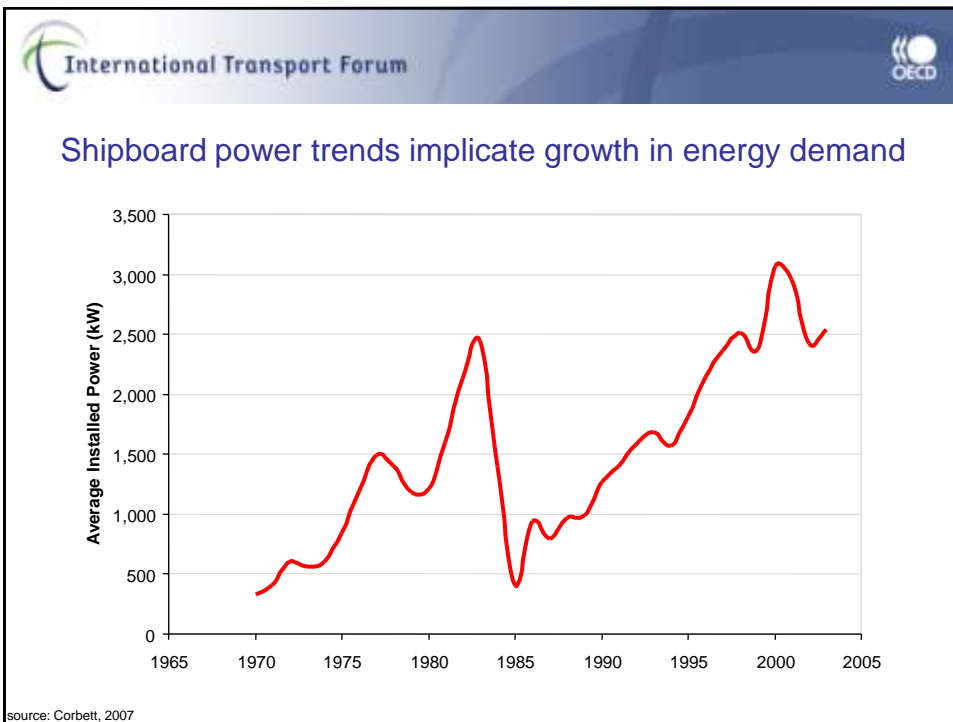
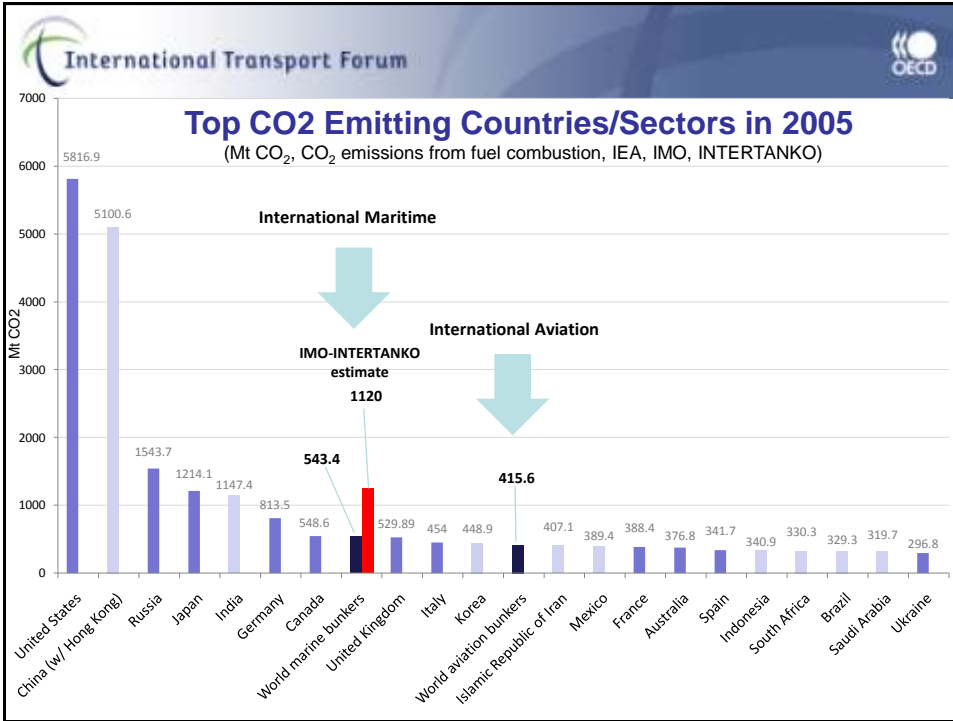


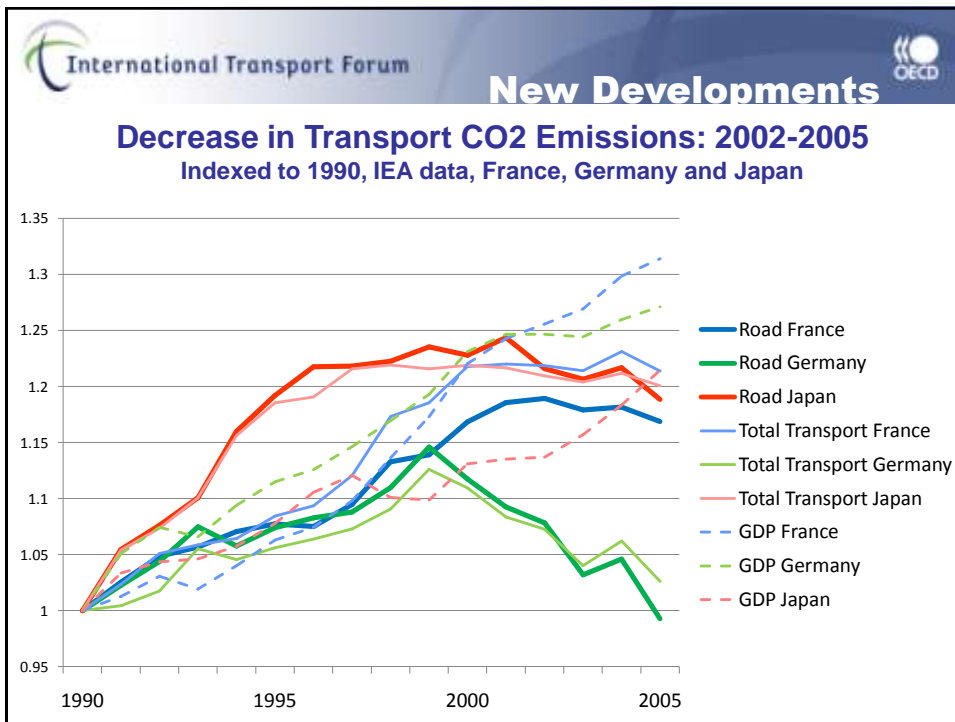
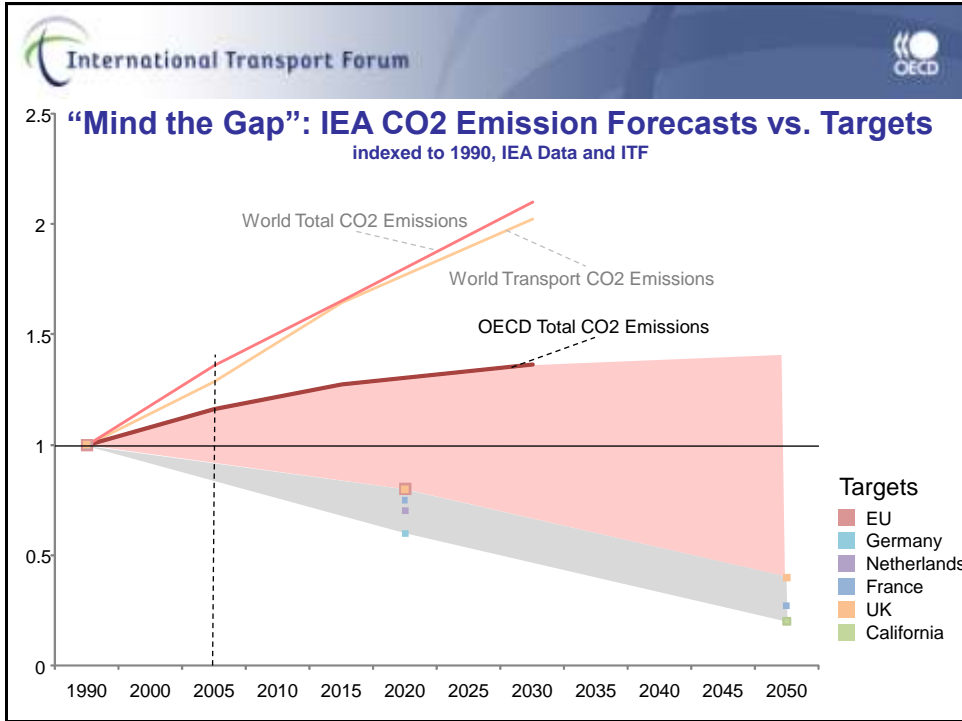









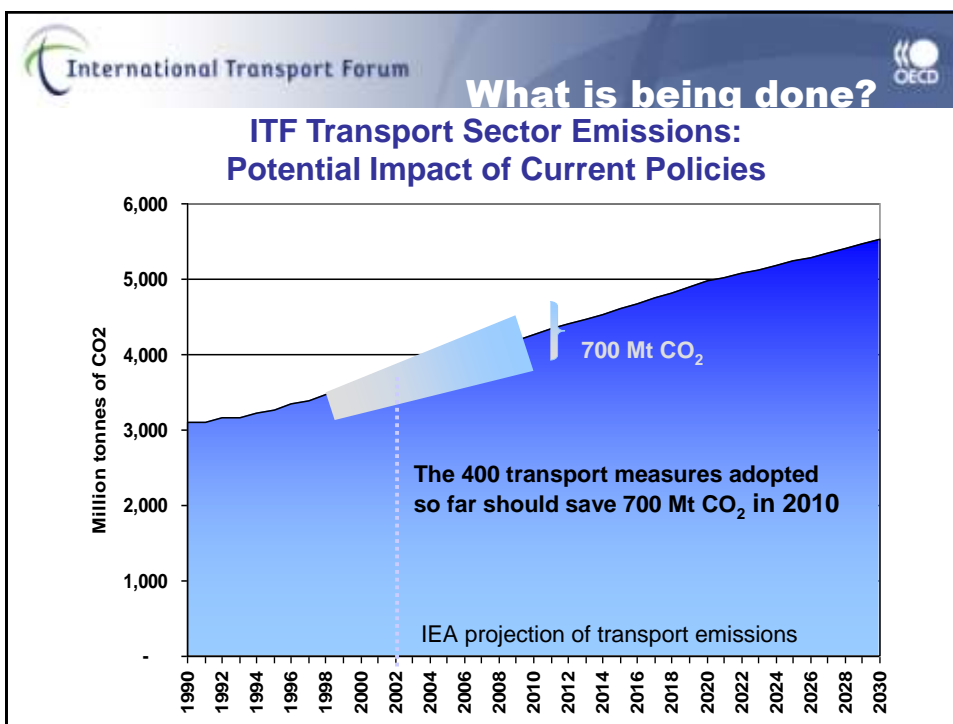





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Outline

- “Mind the Gap”: Trends in the Transport Sector
- Which Policies at What Cost?
 - Our review of Transport GHG Policies
 - Decision framework: Cost Effectiveness
 - Evidence of Transport GHG Marginal Abatement Costs
 - Focus on Fuel Efficiency and Biofuels
- Transport Policy Implications and Priorities





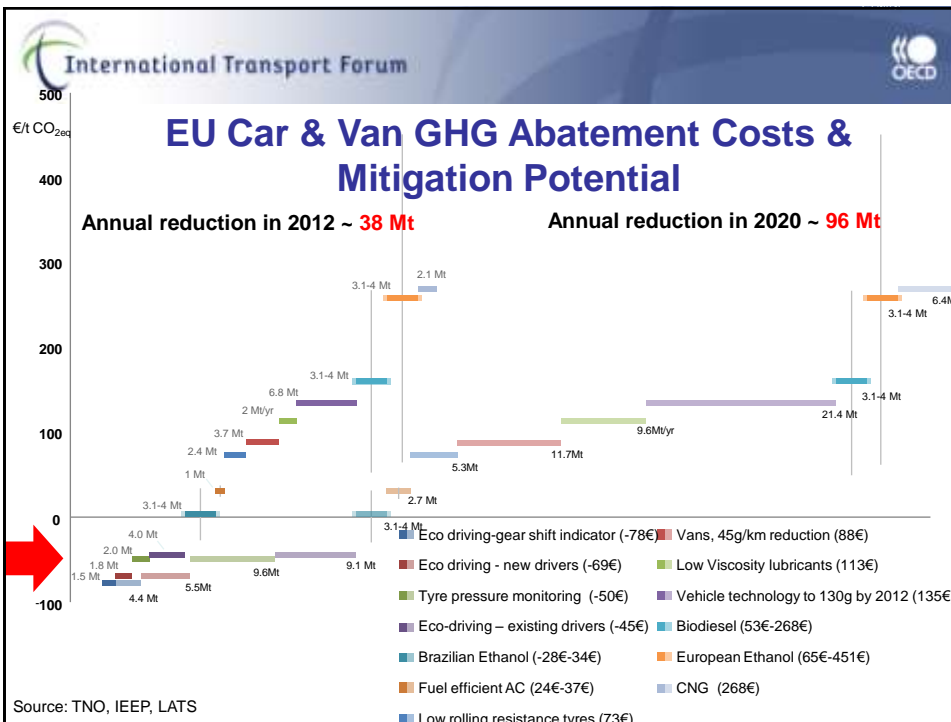
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Principles and Guidance

Cost-effectiveness matters

- Cost-effectiveness fundamental determinant of which abatement policies to adopt
- 2nd best argument – transport should mitigate more because limited de-localisation effects
- Transport reported to have high marginal abatement costs, evidence that this is not so much the case
 - *More rigorous abatement cost analysis needed*
- High cost measures have attracted political support: Hydrogen, Biofuels, Modal shift, Hybrids
- Despite low effectiveness or robust quantification of GHG reduction
- Effective measures have weak political support




Fuel Efficiency: Potential


- Tyres, cruise control, air con effective, lubricants: combined these could save up 5-10% of fuel.
- Diesels: lower potential for improvement
- Reducing vehicle weight important: evidence indicates this can be done without compromising safety
- More ambitious measures might deliver up to a factor 2 improvement by 2035 – but this will be challenging and a crucial question remains: how will people use their fuel savings?

Designing support for Biofuels

- Should not subsidise high CO₂ abatement (\$520-1340/ton CO₂) when lower cost alternatives available.
- Must account for soil released CO₂ and Nitrogen
- Volumetric targets inappropriate
Likely to favour worst performing, lowest cost production
- Transport fuel carbon content targets better
- Certification for biofuels production
- Fuel carbon taxes, including for biofuels, would be more cost-effective than subsidies or targets




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Outline

- “Mind the Gap”: Trends in the Transport Sector
- Which Policies at What Cost?
- **Transport Policy Implications and Priorities**

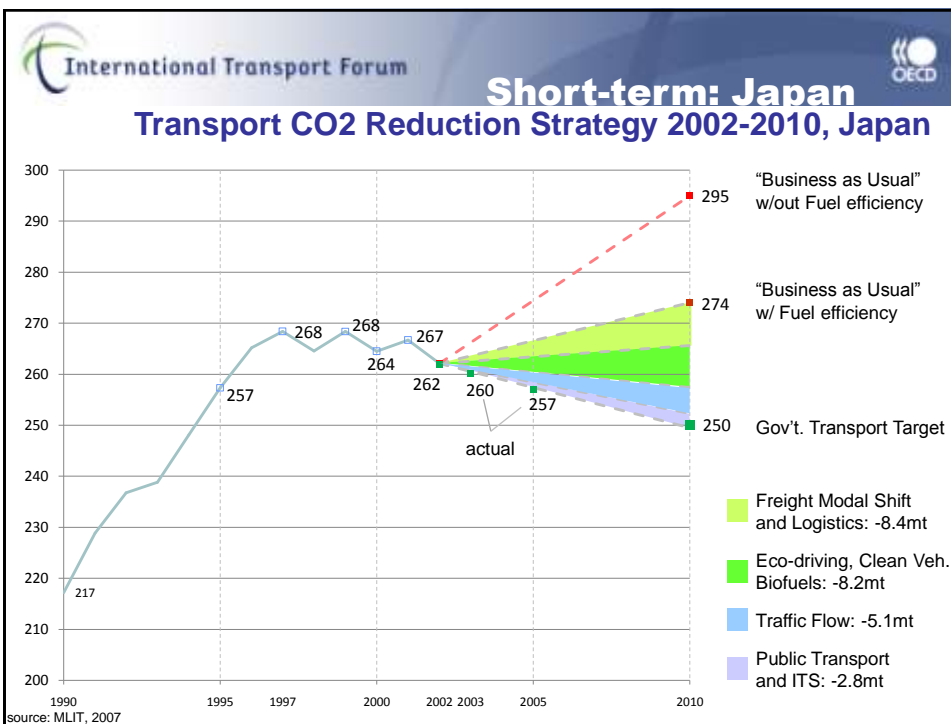
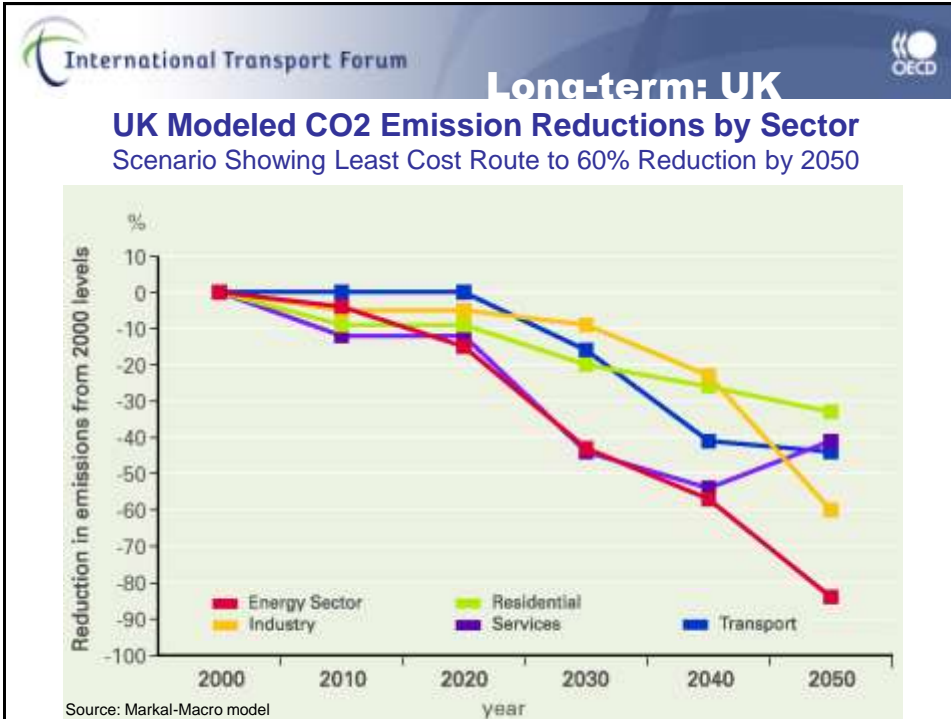



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Policy package (1/2)

- Integrated packages of measures needed
 - Vehicles, fuels, demand management, modal shift : fiscal and regulatory
 - mix depends on context
- Pricing important: London and Stockholm = -20% CO₂, German heavy goods vehicle charge.
- Public Transport, Integrated Land Use Planning, Strategic Infrastructure Investment all can have large co-benefits... and can deliver other benefits even if climate impact difficult to quantify.
- ... but sectors deliver GHG reductions on different time scales






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Policy package (2/2)

- Vehicle efficiency measures deliver the most quantifiable cuts
- Off-cycle components and eco-driving are most cost-effective
 - Significant, immediate savings – should be core measures
 - Give more attention to efficiency, away from only fuels & modal shift co-benefits approach (currently 1/3 of all national policies reported)



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Some Priorities for Road Transport

- Certification of Biofuels, volume targets to become quality targets.
- Differentiate vehicle taxes by CO₂
- New low cost efficiency measures – Identify responsibility for implementation
- Develop off-test vehicle component standards / incentives
- Include CO₂ in transport appraisal
- Increase understanding of transport abatement costs
- Ultimately, we need a price on Carbon.



Some Issues for Maritime Transport

- NO_x – SO_x trade-off (Acid rain, Air quality vs. Global Warming).
- Uncertainty on the total Radiative forcing of Maritime.
- International regulatory context: IMO currently investigating Maritime GHG responses (fuels, CO₂ index for vessels, trading). Weak flag state implication and slow action may lead to regional solutions.
- Lower speeds (-5%=-15% CO₂), operational and institutional barriers.
- Low(er) CO₂ fuels – MDO? Refinery impact?
- Technical measures: hull optimization, choice of propeller, efficient powerplants, in-engine improvements such as fuel injection, heat recovery systems and measures that reduce ship hull friction (20-30% saved for existing and new vessels respectively – but also using on-shore power, wind power.
- Long vessel life-span (hull and engine design today matters in 15-25 years)

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Thank You

For more information:

www.internationaltransportforum.org
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