



Role of Rail as a Base of a Future Sustainable Transport System



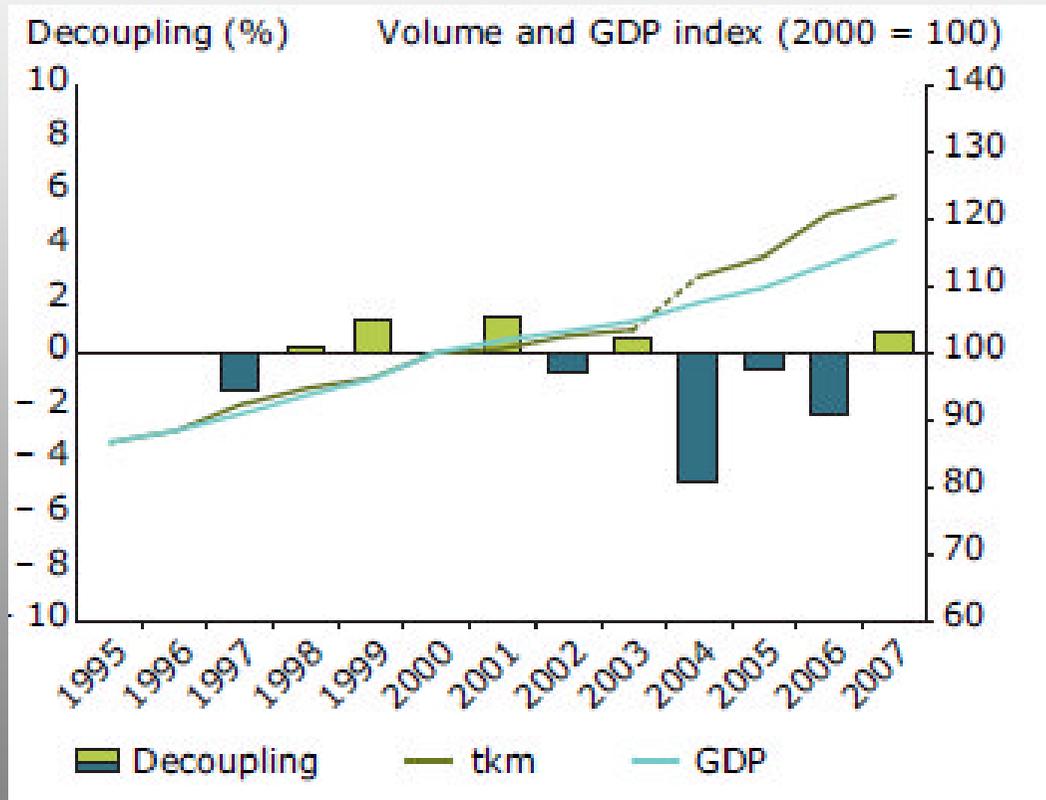
Madrid 16.06.2010

Dr. Peder Jensen

Acting Head of Air and Climate Change Programme, EEA



Freight transport - growing faster than the economy



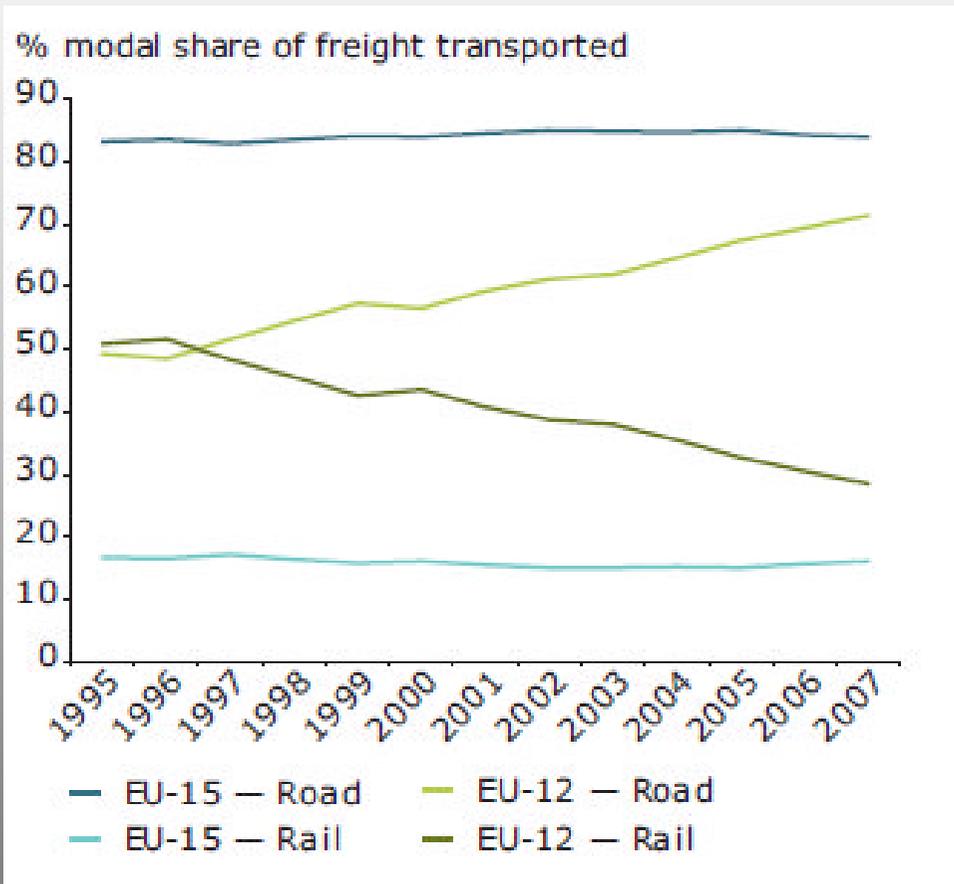
Source: EEA, 2010

- Transport volume growth follows growth in GDP
- No clear signs of decoupling of transport volume from economic growth
- EU-15 MSs show increase in freight intensity



Freight transport

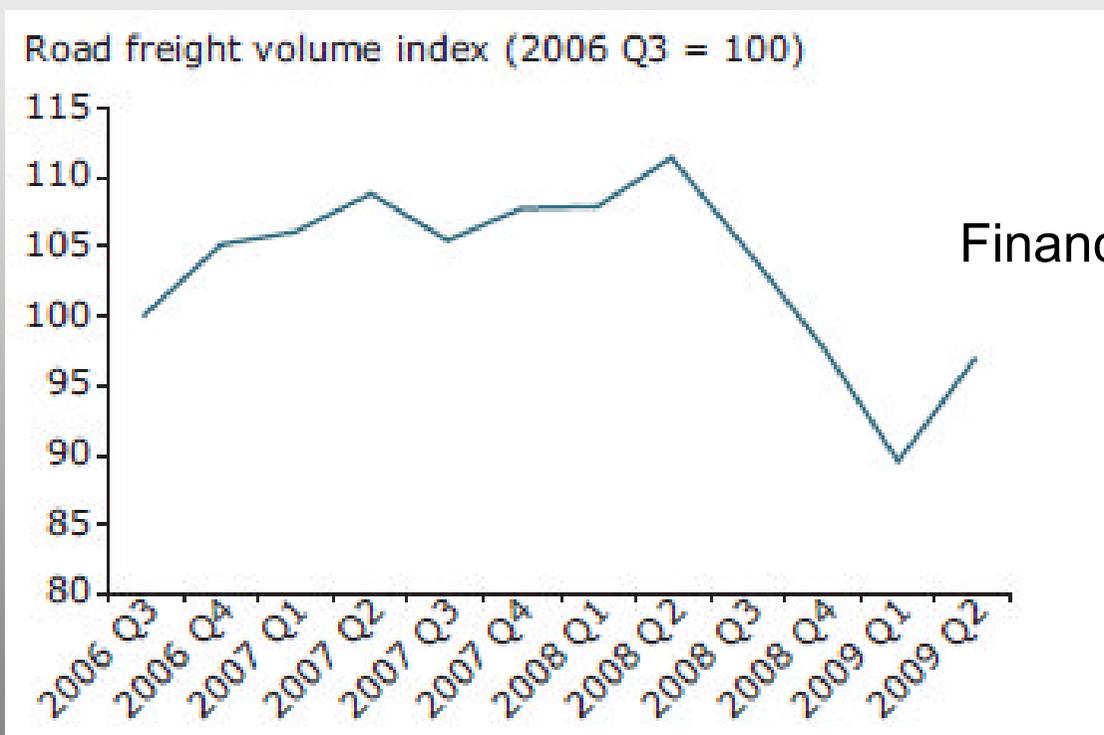
road transport dominates the inland market



Source: EEA, 2010

- Road transport has a 77% market share
- Road transport share has grown at the expense of rail and inland waterway transport
- In the EU-10 road transport's share reached 70% in 2007 at the expense of rail transport

Quarterly road freight statistics

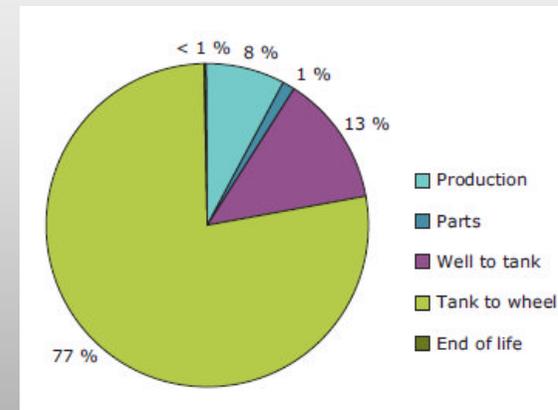
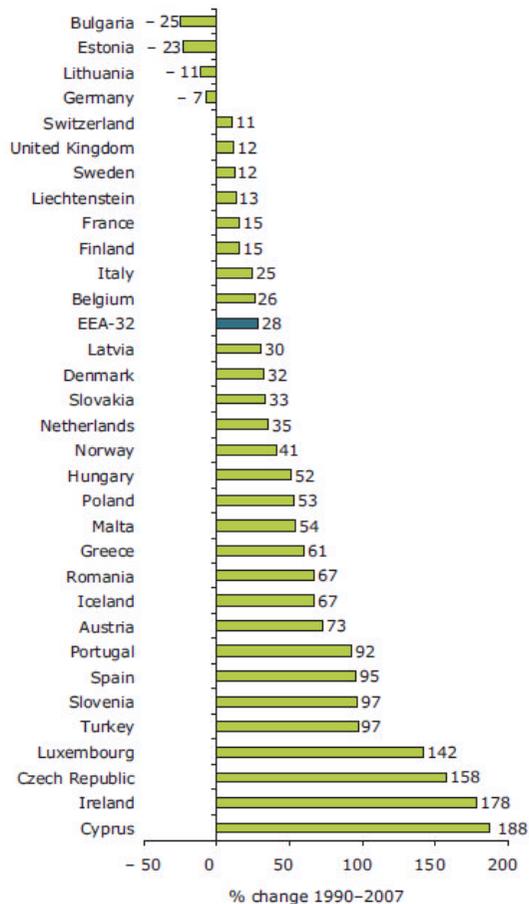


Financial crisis impact clear

Source: EEA, 2010



Greenhouse gas emissions



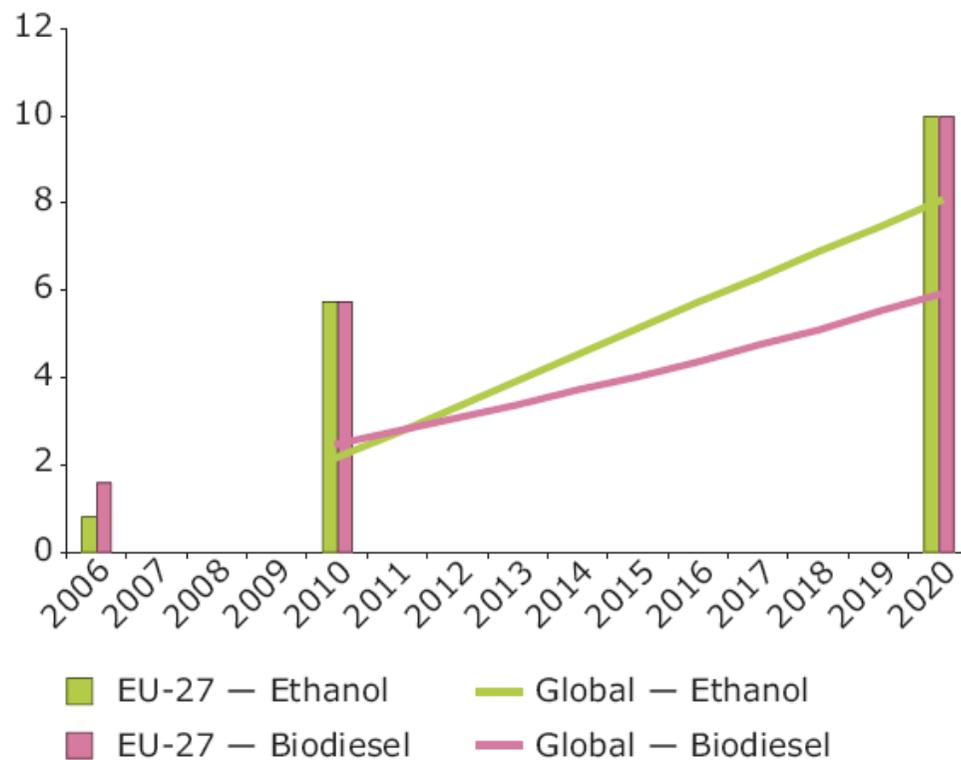
- Transport 19.3 % of all Kyoto greenhouse gases
- 25+ % if bunkers included
- 33+ % if life cycle emissions included

Source: EEA, 2010

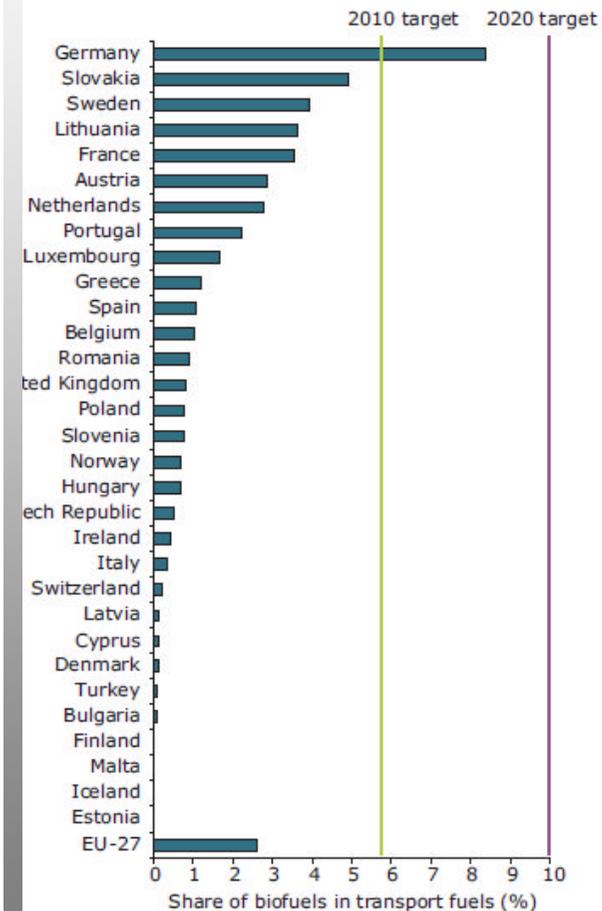


Transport Fuels - biofuel production in EU MSs (2007)

Biofuels share (energy)



Source: EEA, 2008.



Source: EEA, 2009, 2010

European Environment Agency



Noise exposure

Table 7.1 Noise exposure reported by 26 EEA member countries

The overall exposure data as reported by 26 EEA member countries are summarised below. The total population in EU-27 is around 500 million people.

Total population exposed				
	Major roads	Major railways	Major airports	
> 55 dB L_{den}	59 107 300	12 458 000	6 888 100	
Population in agglomerations exposed				
	Roads	Railways	Airports	Industry
> 55 dB L_{den}	41 198 400	3 684 900	1 782 331	761 700
> 50 dB L_{night}	27 802 500	2 516 700	1 081 100	390 700

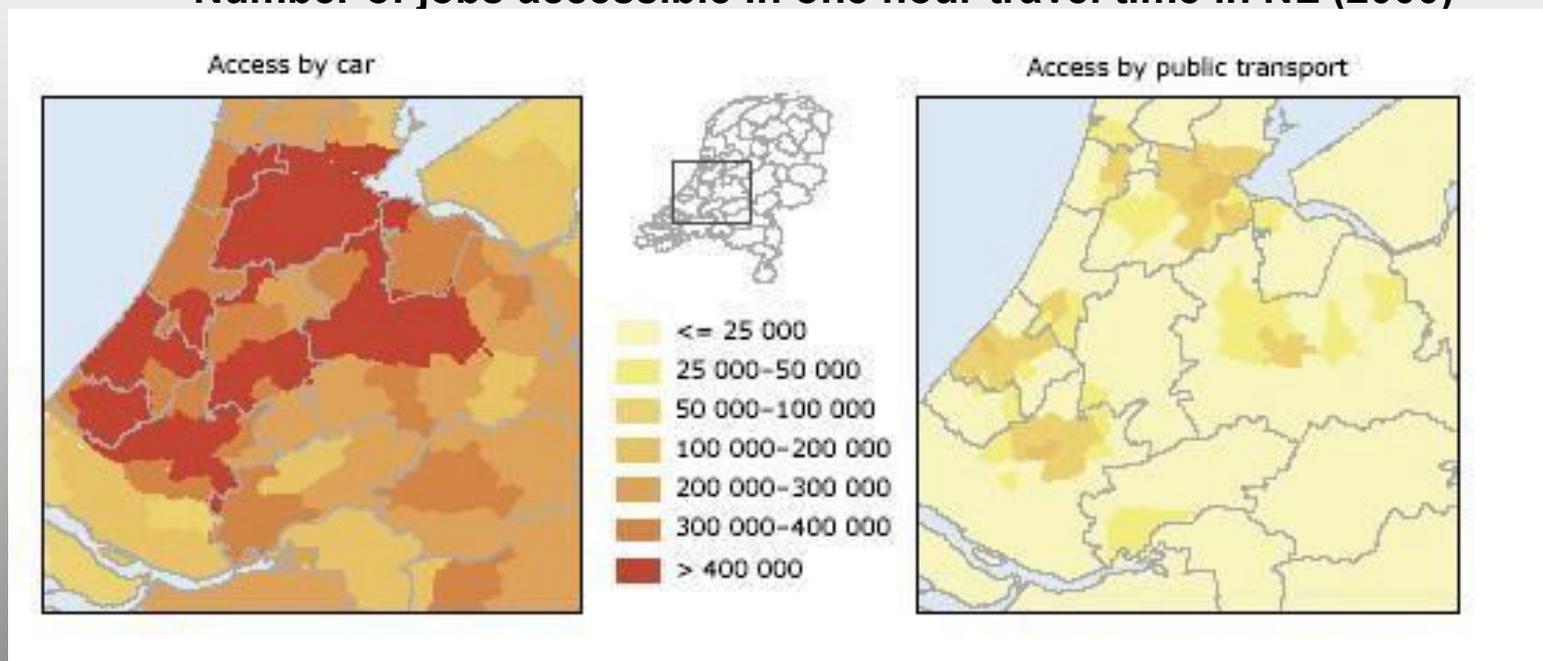
Note: Population exposed based on quality-checked round-one noise maps up to February 2009.

Source: EEA, 2010



Spatial and transport planning: matching transport demand to the needs of access?

Number of jobs accessible in one hour travel time in NL (2000)



☹ **Accessibility low for those without a car**

Source: EEA, 2004



Example: Fehmarn bridge

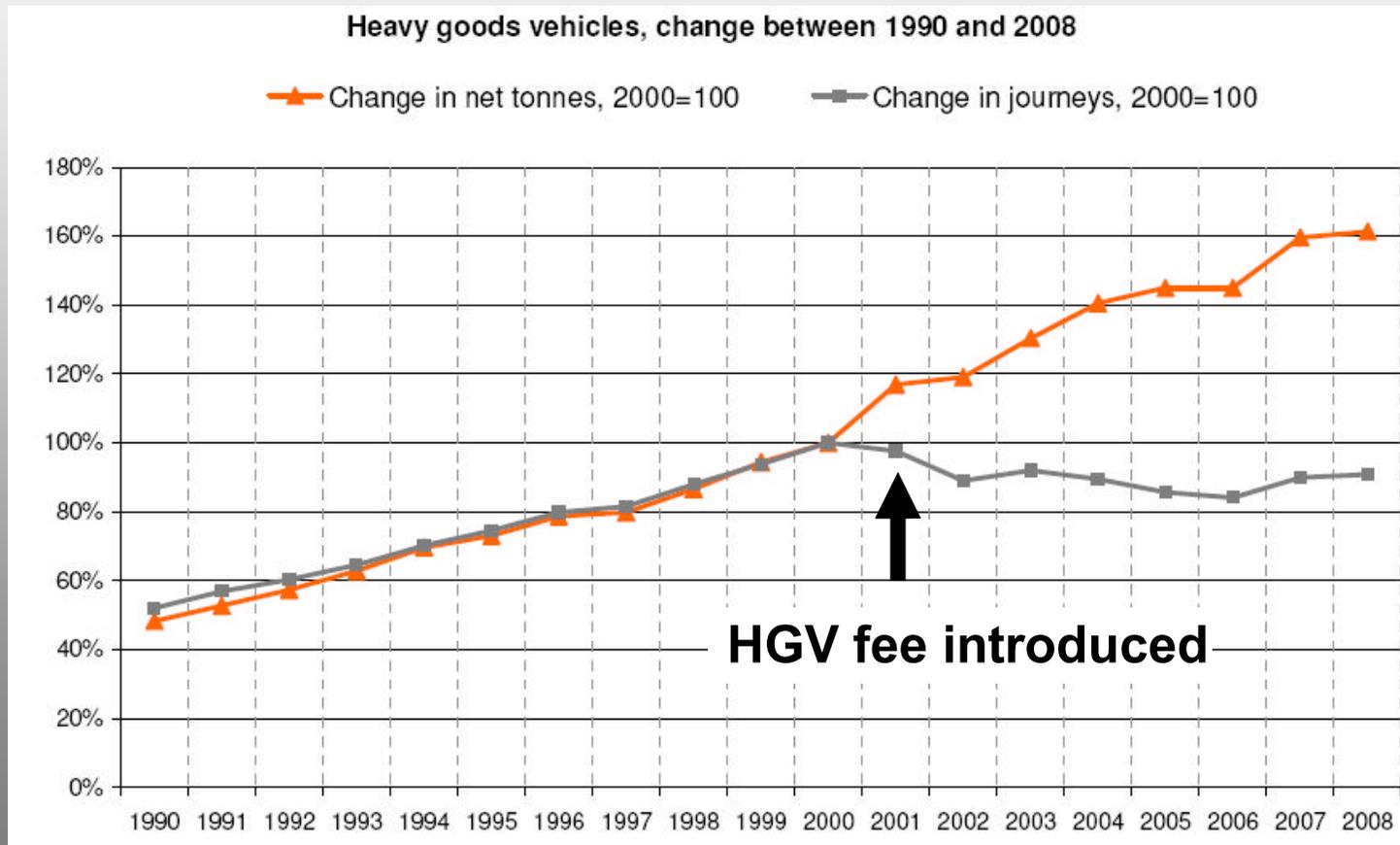


Source: EC, 2009



**Rail single track
first 7 years**

Example: Alps crossing

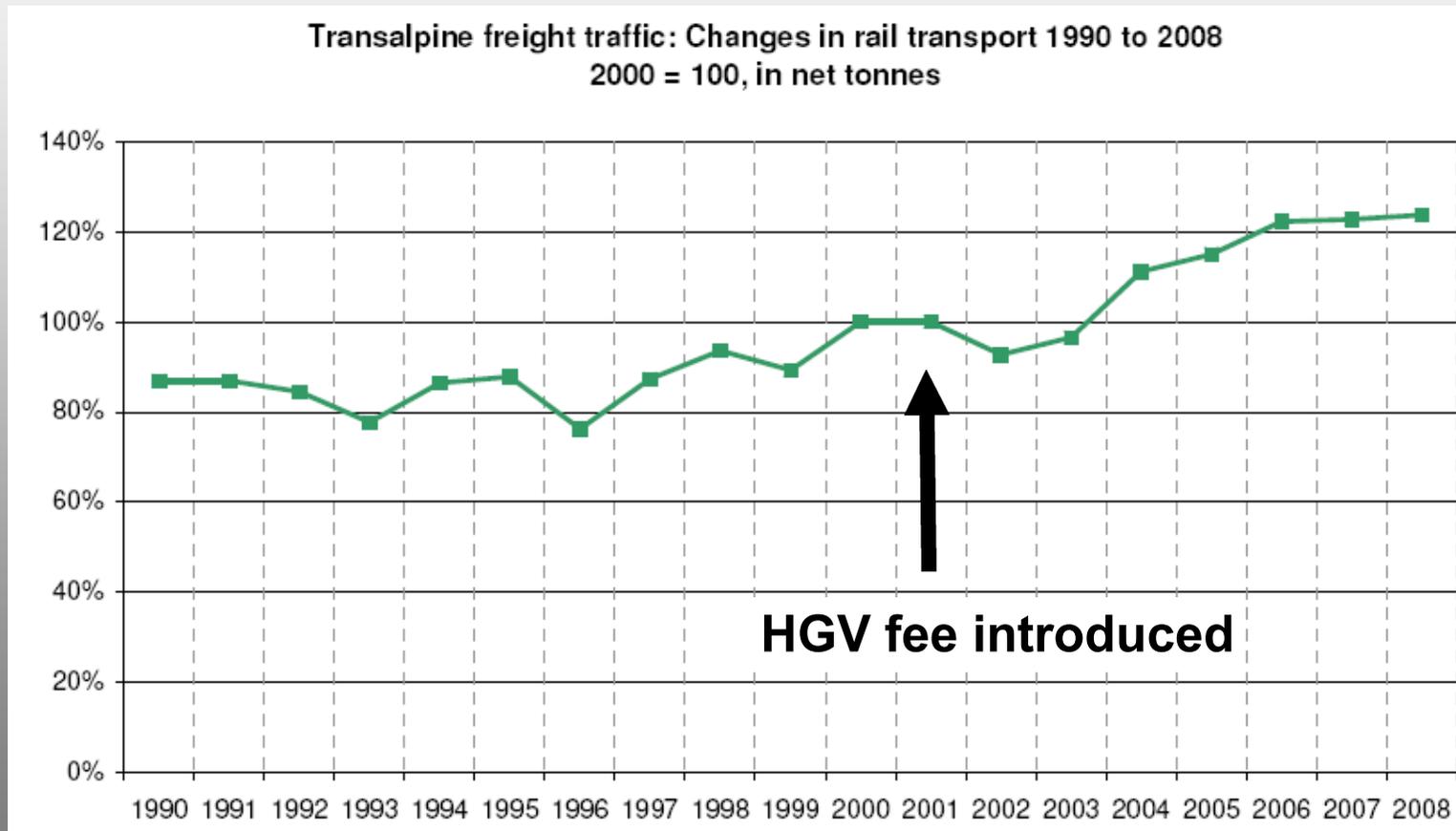


Source: Swiss NGO, 2009

European Environment Agency



Example: Alps crossing



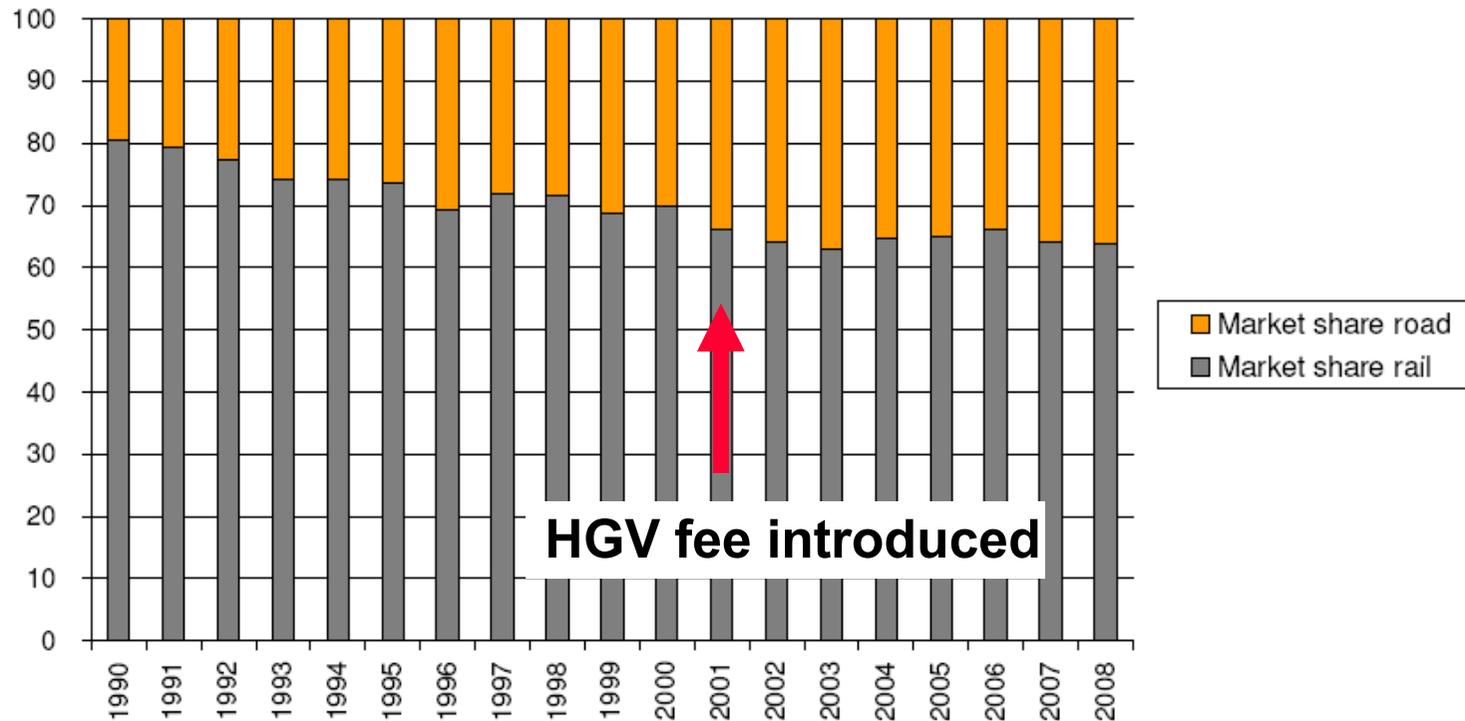
Source: Swiss NGO, 2009

European Environment Agency



Example: Alps crossing

Freight traffic crossing the Swiss Alps (total):
percentage change in market share, 1990 to 2008

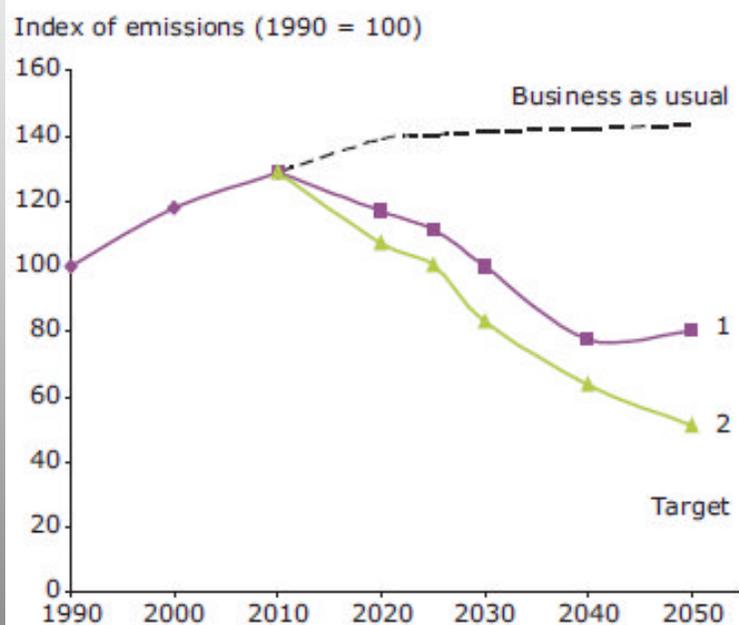


Source: Swiss NGO, 2009

European Environment Agency



Combined measures



Each curve shows the additional effect of adding further instruments.

- 1 'Improve' package: improved engine and vehicle design, electric cars, low-carbon fuels and technologies encouraging behavioural change. These measures lead to a 44 % reduction in transport CO₂ emissions.
- 2 'Avoid and shift' package: road pricing, car clubs, increasing population density in cities, travel planning. These measures lead to a 20 % reduction in transport CO₂ emissions.



New York Times – Green Blog

Green

A Blog About Energy and the Environment



April 23, 2010, 9:32 am

Imagining a Jet-Free Europe

By [ELISABETH ROSENTHAL](#)

On April 15, the European Environment Agency in Copenhagen convened a two-day workshop on how to move toward a more sustainable transport system on the Continent by 2050. Since flying is by far the most highly emitting form of transportation, the central question was “How would Europe look and function without aviation or with much less aviation than we have now?” as Peder Jensen, the agency’s transportation expert and the event’s organizer, put it.

Perfect timing. As participants from all over Europe gathered, a cloud of volcanic ash was spreading eastward from Iceland and by day’s end had grounded flights from Britain to Germany. “On Thursday morning [the 15th] the participants couldn’t imagine Europe without aviation; by Friday night they were living it – I just got the last person home yesterday, to Spain, by rail,” Dr. Jensen said in a telephone interview on Thursday.

“It takes something like a giant ash cloud to get people to imagine something different,” he said.

To reduce Europe’s emissions, the agency is looking hard at whether high-speed rail could partly – or mostly – replace aviation on a Continent that is highly interconnected by fleets of planes...

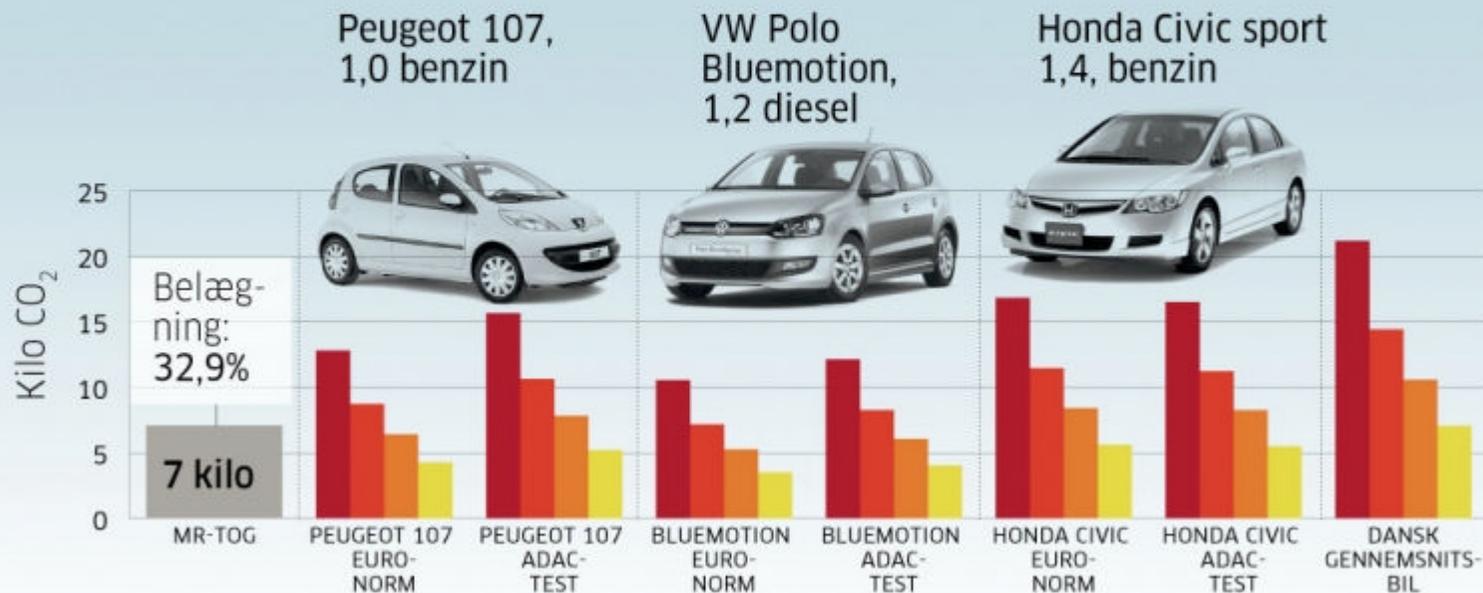


Intercity traffic – feeder lines

Vejle-Struer

CO₂-udledning pr. person

■ Ved 1 passager ■ 2 passagerer ■ 1,47 passagerer* ■ 3 passagerer



*1,47 passagerer i bilen er gennemsnittet for biler på danske veje.



Flying car 2010



Source: www.moller.com, 2010

Conclusion

Rail is part of the future sustainable transport system

... If we want it to be!

We must create a common vision for this system to guide long term planning

Creating a new common transport policy is essentially creating this vision.

