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Transport and environment in Europe

Growing transport volumes are leading to increased pressure on the environment especially in relation to climate change and biodiversity loss. Present efforts to counteract these trends are at best only slowing down the rate of increase.

On the positive side, technological improvements are delivering reductions in air pollution from road transport despite the growth in traffic volumes. Even so, more is needed to solve the problem of urban air pollution.

This briefing looks at developments from the early 1990s to the early 2000s.

Trends in the transport sector

Transport volumes still rising

Decoupling transport growth from economic growth has been a key aim of EU transport policy for several years but has yet to be achieved. Transport volumes in the EU grew steadily at about the same rate as the economy or above: almost 20 % for passenger transport and about 30 % for freight transport.

Road and air growing faster than other modes

Another key aim of EU transport policy is to stabilise modal shares at 1998 levels by 2010.

However, transport growth in the 1990s was dominated by road and air transport, while other modes such as rail, bus and inland waterways tended to stagnate or even decline. Air transport was the fastest growing mode with an annual growth of 5 % or more.

Transport infrastructure continuing to expand

During the last decade, the motorway network increased by over 12 000 km in the old Member States and by about 1 000 km in the new.

Investments in the EU Trans-European Transport Network have focused mainly on filling cross-border gaps in high-speed rail and road networks, with the road programme well ahead of rail.

As a result, the total length of highways grew quickly, while the extent of conventional rail and inland waterways infrastructure slowly diminished.

Price structures in general not supporting the aims of the EU transport policy

There has been slow progress in restructuring transport charges towards a better internalisation of external costs, which would help to reduce the overall demand for transport and transport infrastructure, and also to optimise the modal split.

For example, prices continue to favour the private car instead of public transport. The total cost for car transport, covering both purchase and operational costs, has remained stable while costs for other modes have grown. This implies that mobility is decreasing for those without access to a car.

Regulations to recover part of the infrastructure expenses are being put in place for rail and road transport, and there are growing calls for the introduction of a fuel tax on intra-EU flights.

European Environment Agency

Environmental trends

Emissions of harmful pollutants falling

There has been a substantial drop in emissions of harmful pollutants from road vehicles. The fall can be ascribed to the EU emission standards for road vehicles, which have been successively tightened since the beginning of the 1990s, a process that is still ongoing. Emissions of regulated pollutants have decreased by 24 % to 35 % (international aviation and marine shipping not included).

However, in spite of the reduction of air pollution from road transport, there are still serious air quality problems in urban areas. Further initiatives are needed to reduce people's exposure to health affecting pollutants.

Ensuring that test cycles reflect real-world driving conditions, including 'chip-tuning' of diesel cars, could be just as important as a further tightening of the standards for road vehicles.

Emissions standards will first be introduced for railway locomotives and inland vessels from 2005 onward. International standards for emissions from aircraft have existed for many years, and were tightened in the 1990s. However, these standards only take account of emissions at and around airports; emissions while cruising at altitude, which contribute to global warming, are not considered.

Greenhouse gas emissions increasing

Passenger cars have become more efficient. However the resulting decrease in specific CO_2 emissions from cars has been more than offset by the growth in transport. The result is a net increase of about 20 % in CO_2 emissions from road transport.

The present commitments by the car industry to reduce CO_2 emissions from cars expire in 2008/2009. There is therefore a need to clarify the future regime in this area, expanding the scope to cover vans and ensuring that test cycles reflect real world driving conditions and the use of equipment such as air conditioners.

Aviation is also an important and growing contributor to CO_2 emissions. With air transport growing rapidly, its climate impacts will soon exceed those of passenger vehicles, and by 2030 the impact is predicted to be twice as large. Along with international shipping, aviation is not regulated under the Kyoto Protocol.

Pressure on habitats increasing

Transport infrastructure puts pressure on habitats and biodiversity through the direct use of land, noise and light disturbances, air pollution and fragmentation of landscapes. As transport infrastructure expands, more and more designated nature areas will come under pressure. On average, about half of the designated areas in Europe are already affected by transport. There are large regional differences closely related to variations in population density, but transport is having a serious impact even in remote areas in the Arctic region.

References

Ten key transport and environment issues for policy-makers, EEA Report No. 3/2004, European Environment Agency, Copenhagen, 2004.

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