

## Executive Summary

Getting the prices right was a fundamental requirement from environmental NGOs in the early 1990s. Transport prices should better reflect the real costs to the users, make the transport sector more efficient and reduce its negative impacts on the environment and the citizens. Transport users should pay for transport related costs according to the user and polluter pays principle. Such a pricing system would give the right incentives to the users, a correct price to transport and to the use of scarce resources related to transport.

Getting the prices right is still a fundamental requirement in 2003. Transport users do not yet pay for the negative impact they impose on the environment and the society in form of air pollution, noise annoyance, greenhouse gas emissions, accidents, land take and barrier effects. Transport prices do not yet reflect the real scarcity of the resources used. Scarce resources are still wasted in an unsustainable transport system.

Over the last ten years, the policy framework of the European Union has changed. Environmental aspects have become more important. The Treaty of Nice requires in article 6 the integration of environmental protection into Community policies and activities. However, this has not improved the environmental performance of transport at all. The transport and environment reporting mechanism (TERM) of the European Environment Agency in 2001 contains a simple message: transport is becoming less and not more environmentally sustainable. The main problems are:

- ? Ongoing transport growth
- ? Ongoing increase of transport related greenhouse gas emissions
- ? High number of people in urban areas and sustainable areas suffering from air emission level above EU emission standards.
- ? Increasing number of people suffering from transport related noise
- ? Ongoing high pressure on land use and biodiversity from transport infrastructure
- ? Unacceptably high road fatalities
- ? Increasing congestion

On a very general level, there is a widely shared agreement to make the current transport system more sustainable. The Sustainable Development Strategy, approved by heads of states and governments at the Gothenburg Summit in June 2001 defines decoupling of transport and economic growth and modal shift towards more environmental friendly modes as the main objectives for the transport sector. However, politicians failed so far to fix

explicit targets in order to change traditional transport patterns and to reduce the above-mentioned transport related problems. Only a few targets exist on European level. The White Paper on Common Transport Policy includes two targets:

- ? The number of road deaths should be halved by 2010
- ? The rail share should be stabilised at the level of 1998.

An important target for the European Union is confirmed in the Kyoto protocol. The emissions of greenhouse gases within the European Union should be reduced by 8 % by 2008 compared to the level of 1990. However, the Kyoto protocol does not provide targets for individual sectors like transport, but only for total emissions. Further explicit targets are needed in order to give a measurable guideline for required instruments and measures. Such targets may be e.g.

- ? Reduce transport related CO<sub>2</sub> emissions by 2010 by x %.
- ? Reduce the number of people to be exposed to transport related air emissions by 2010 by x %.<sup>1</sup>
- ? Reduce the number of people to be exposed to transport noise above annoyance level by 2010 by x %.<sup>2</sup>
- ? No additional threat to sensitive areas, natural sites, wetlands from the construction of new transport infrastructure.

Once such targets are fixed, a wide range of instruments is necessary to achieve them. In the past, transport policy did not use the whole range of possible instruments but was concentrated on a few types. One can distinguish between the following types of instruments:<sup>3</sup>

- ? Information and persuasion: popular and necessary, but not efficient and only effective in the long term.
- ? Regulation: less and less popular but necessary and effective though not very efficient.
- ? Technical improvements: popular and necessary, not effective alone, limited efficiency.
- ? Infrastructure: popular, but neither effective nor efficient and seldom necessary
- ? Economic instruments: efficient and necessary, but not effective for all targets and not really popular

<sup>1</sup> Related to existing air quality legislation which must anyway be met (European Parliament and Council 2001).

<sup>2</sup> The Commission must give a progress report on noise next year (European Parliament and Council 2002)

<sup>3</sup> The characteristics of each group of instruments are simplified. See chapter 4 for a more comprehensive analysis.

Transport economists thus are indeed united in their agreement that the most economic approach to transport pricing would be the application of marginal social costs: the price paid by transport users should reflect the amount of transport they are “consuming” and all costs they are generating as transport users.

Unfortunately this widespread agreement by economists on the rationality of such a change has not yet convinced policy makers to implement fair and efficient pricing systems. Indeed much of the debate surrounding transport pricing focuses on how it may be possible to measure exactly the marginal social costs, rather than changing the price structure.

Research over the last 10 years has also shown the limits of social marginal cost pricing. The theoretical conditions of a perfect market, upon which social marginal cost pricing is based do not exist in the real world. It is further focused on efficiency. However, efficiency is not the only objective in transport policy or in policy in general.

After 10 years of discussion it is time to move away from the question on what the perfect price and perfect methodology might be. It is time to implement **target oriented pricing** as we know enough first of all that today's prices are perfectly wrong. The implementation of a target oriented pricing could follow the following approach:

- ? Identify the problems (these have been well known for a long time already; see chapter 2)
- ? Set targets with an explicit timeframe to reduce the problems (targets hardly exist so far in transport, see chapter 3)
- ? Introduce a pricing system based on the known and generally accepted types of costs and cost levels
- ? Apply other instruments focused on the target (e.g. technical improvements, regulations)
- ? Evaluate the effectiveness of the instruments in reaching the targets after a certain period
- ? Progressively strengthen the target and set a timeframe for intermediary targets (e.g. the Kyoto target to reduce greenhouse gas emissions by 8 % is only a first step, in the long term these emissions must be reduced much more <sup>4</sup>)
- ? Adjust the instruments and its parameters once the system is up and running. At this moment at the latest, it will be time to increase the initially low-level prices.

Pricing also generates substantial revenues and the crucial question is what to do with them becomes important for two reasons:

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<sup>4</sup> The Royal Commission on Environmental pollution's 22<sup>nd</sup> report, page 199, recommends a 60 % reduction by 2050 compared to 1997. See also UNFCCC.

- ? Depending on the use of the revenues, those can support the objectives of the pricing system or create the opposite effects
- ? The acceptability of pricing systems depends on the use of revenues. The acceptability is higher if the revenues are used for the transport sector or if the transport sector is compensated by the reduction of other taxes<sup>5</sup>

With regard to economic efficiency, revenues should be used:

- ? For the general budget and
- ? To reduce direct taxes.

However, these solutions are faced with very low acceptability as users, taxpayers and politicians tend to prefer:

- ? Earmarking the revenues for transport
- ? Reducing transport related taxes

Therefore, some principles must be followed by earmarking some or all of the revenues and by compensating the users for acceptability reasons:

- ? The revenues should be used for the general budget or for measures supporting the objectives of a sustainable transport policy and enabling to reduce the negative impacts of transport. This means that all projects need to be subject to an integrated economic and strategic environmental assessment.
- ? The field in which earmarked money must be used should be as open as possible to maintain a certain flexibility. This ensures a more efficient use of money than a narrow field with few possibilities to spend the money. Earmarking the money for all transport modes is in any case better than for the transport sector which generates the revenues.
- ? Some of the revenues can be compensated by reducing other public income if the costs have already been included in the public budget but paid by taxpayers.
- ? Ideally, all citizens should benefit from this compensation as all citizens are concerned by the negative impacts of transport. Thus, the reduction of non transport related taxes should be preferred.
- ? Transport related taxes should only be reduced if they contradict the objectives of fair and efficient pricing. Regular taxes on transport, e.g. as fuel taxes should continue and do not contradict to a fair and efficient pricing system.

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<sup>5</sup> See final conclusions from PATS (Pricing Acceptability in the Transport Sector) project (PATS 2001).