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**SEA of International Transport Policies and
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Why Is It not Done?**

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INTRODUCTION

Internationally, there is a growing consensus that strategic environmental assessment (SEA) of policies, plans and programmes is essential to ensure that environmental considerations are incorporated at all levels of decision making and on par with socio-economic considerations. Various international reviews of the status of SEA show that the transport sector is currently the most advanced as regards the uptake of SEA. Four countries (Denmark, Finland, Italy and The Netherlands) have already anticipated EC legislation and have general requirements in place for SEA for policies, plans and programmes. SEA for the transport sector is mandatory following separate Government decisions in Denmark, Finland, France and Sweden. Furthermore, the practice of SEA the transport sector is emerging in several countries, driven by pioneering initiatives in the Nordic Member States, the Netherlands and France.ⁱ

Logically, SEA is a process which could very usefully assist international transport planning, and as such also be of support to the implementation of the Espoo convention on trans-boundary impact assessment. And yet, very few international SEA have been made till date. The case of the TEN, where the Commission already for several years is trying to develop an SEA approach, is illustrative in this respect. Already in 1992, the White Paper on the CTP stated that SEA will be used to support all transport investment programme decisions (TEN and non-TEN). The Amsterdam Treaty put integration of environmental concerns into sectoral policies high on the political agenda, and identified SEA as one of the main tools to achieve this. The Commission's Communication on integration reiterated the importance of strategic environmental assessment (SEA) as a tool for promoting integration of environmental concerns in sectoral policies, and in it the Commission committed to apply SEA for all Community policies.

The Commission has however not succeeded in actually implementing SEA of the TEN and in linking this to the decision making process. Even though the issue has been on the table for many years, no clear strategy for the TEN is as yet emerging. This does not mean that no action has been taken in this domain. In 1992, DGVII made an environmental assessment of the European HSR network, comparing the network with the impact of motorways and aviation. However, this took the form of a study, which was not directly linked to the decision making process. Since then the Commission's activities have been limited to methodological work. In 1996, the a SEA work programme for the TEN was initiated by the adoption of the Community guidelines on the TEN (which require that the Commission develops methods for the SEA of the whole TEN and for corridor assessments). In this context, the Commission has undertaken a pilot SEA of the whole multi-modal TEN (with support by the EEA) and various transport corridor assessments (in co-operation with the Member states). In addition, a methodological handbook has been developed, which provides practical guidance for the carrying out of transport network and corridor assessments. It is as yet unclear whether and how the Commission and the Member States intend to put this experience in practice.

The present paper attempts to identify the main reasons as to why SEA for international transport policies and plans is still at an embryonic stage, and illustrates this for the case of the TEN.

ISSUE 1: DATA AVAILABILITY, TECHNIQUES AND TOOLS

Policy makers often quote lacks in data and methods as the main reason for not carrying out SEA. However, case experience indicates that most of the analytical methods and techniques needed for SEA are available, either from project EIA or from policy appraisal / plan evaluation. A wide range of analytical methods and techniques is already available and operational. A comprehensive overview of existing techniques is amongst others documented in the DGVII manual on SEA of transport plansⁱⁱ. They are either derived from project EIA or from policy appraisal / plan evaluation.

To be cost-effective, SEA at national/regional level is best carried out based on national/regional data and techniques. This means that in some countries methods used are much more complex than in others. However, as long as no country comparisons need to be made, this constitutes no real problem.

Harmonisation of data and techniques does constitute a problem for international SEAs, as this requires that impact predictions in different countries are made on a comparable basis. The European Environment Agency has especially been created for the purpose of harmonised data collection on environment and land cover (see box). Other international institutions such as Eurostat, ECMT, UN-ECE have well established systems for transport and socio-economic data collection. Still, many data gaps and quality problems remain to be solved, and it is only through concerted action of countries that systems can be optimised.

At EU level, an additional impetus towards international harmonisation of environmental and transport data has been recently given by the setting up of the Transport and Environment Reporting Mechanism (TERM). TERM has been set up following the Cardiff Summit in 1998, where to Council prioritised the integration of environmental concerns into sectoral policies. It involves a co-operation between the EEA and the Commission (DGVII, DGXI, Eurostat). TERM's aim is to monitor progress towards integration of transport/environment policies in the EU. At the core of TERM are 29 indicators, on the basis of which EEA will regularly report. TERM is conceived as a multi-year process, through which transport and environmental data, indicators and assessment methods will be improved gradually.

As regards assessment techniques, international traffic modelling and forecasting constitute a major problem. Most countries have national or regional traffic forecast models, but these often use different variables. The models are therefore often non-transferable from one country to another. A study by the European Commission demonstrated the many differences in existing approaches, the inadequacy of various models to deal with this specific issue and a general lack in knowledge and monitoring data.ⁱⁱⁱ

The lack of harmonisation of environmental models also often hampers a trans-boundary approach. However, various efforts have and are being made to harmonise models. Examples are the EEA's COPERT model for estimating air emissions from road transport) and several RTD projects developed by DGVII (e.g. COMMUTE and MEET projects).

Many countries use Geographic information system (GIS) as an analysis and evaluation tool, as GIS provides many possibilities for clearly visualising the results of traffic and environmental models. Its zoning features and the possibility to confront various layers of information can provide interesting solutions (e.g. sensitivity mapping), in particular for those impacts which have a direct spatial component. The use of GIS in an international context obviously also relies on the availability of harmonised data layers of geographical, infrastructure and environmental data. Again, international institutions have a major role to play in this. The Corine Land Cover map, developed by the Agency on the basis of national data, can be extremely useful in this context. It provides an inventory of land cover data split according to 44 categories of land cover and at a scale of 1:100,000. A methodological approach for the spatial/ecological assessment of the TEN and its corridors, showing amongst others the potentials of the Corine land cover map, was made by the European Environment Agency in 1997.^{iv}

Cost benefit analyses is another often used technique. However, the detailed methods and values used vary considerably between countries which adopt this approach. Problems mainly relate to the valuing of environmental impacts, as scientific knowledge is still incomplete and cost evaluation is often performed in a subjective or political manner.

MCA is a technique used to rank projects, by giving separate scores on a number of key evaluation criteria. Using mathematical operations, combinations of weights and criteria scores provide a ranking of options. The advantage of MCA over CBA is that it allows for the joint analysis of both environmental and financial costs, even when the environmental costs cannot be valued in monetary terms. MCA is a 'subjective' technique; weighting criteria are either chosen using expert judgement or dependent on policy objectives and targets. Again, the application of this techniques in an international context requires in depth consultation between countries.

Box 1: Mandate of the European Environment Agency

The European Environment Agency's mandate (defined by Council Regulation (EEC) No. 1210/90) is to ensure the supply of objective, reliable and comprehensive information at European level, enabling its member states to take the requisite measures to protect their environment, to assess the result of such measures and to insure that the public is properly informed about the state of the environment. Current EEA membership includes all 15 EU states, as well as Iceland, Liechtenstein and Norway.

The Agency uses not only existing capacities in member states, but co-operates actively with other bodies and international organisations to build synergy and to avoid duplicate efforts. Data and information collection tasks are carried through the European Information and Observation Network (EIONET), which was set up and is co-ordinated by the Agency. EIONET consists of national networks organised by the Agency to help it retrieve data and information,

identify special issues and produce efficient and timely information on Europe's environment.

The European Topic Centres form part of the EIONET, and are appointed by the EEA for executing specific tasks, especially providing thematic information. The EEA assesses the resulting data and information and distributes them in streamlined form to would-be users.

The Agency furnishes information which can be directly used in the implementation of Community environment policy. Priority is given to transfrontier, multinational and global phenomena, and thus to the following areas of work:

- air quality and atmospheric emissions
- water quality, pollutants and water resources
- the state of the soil, of fauna and flora, and of biotopes
- land use and natural resources
- waste management
- noise emissions
- chemical substances hazardous for the environment
- coastal protection.

Conclusion: *International SEA requires the development of harmonised databases on transport and the environment (including land cover/land use data). At European level, existing systems for data collection should be improved to meet international SEA requirements. International bodies such as EEA, Eurostat, ECMT and UN-ECE have a major role to play, both in developing guidelines for data collection at country level, as for the bringing together of national data in harmonised and central databases. The practice of international SEA could furthermore drive data optimisation.*

A wide variety of SEA tools and techniques is already available, but these are always optimally applied. This indicates an overall lack in dissemination of knowledge and information. As such, multi-country SEAs constitute an interesting opportunity for exchanging of knowledge.

The challenge for a multi-country SEA lies in the selection of common techniques, applicable within constraints of data availability of all the countries involved, and taking into account various national policy priorities. Even though major methodological problems still need to be tackled, several internationally applicable techniques have and are being developed.

ISSUE 2: OBJECTIVES AND TARGETS

Objectives and targets form the essential framework of each SEA system. They allow the identification of indicators, the evaluation of the significance of impacts and set the frame in which against which the monitoring should be undertaken. Targets can address the various areas of the transport and environment system:

- **transport targets** can be formulated as, for example, traffic-reduction targets, targets related to the modal share of the transport system, regional targets (e.g. reduction of road traffic in cities, reduction of transit road traffic in sensitive areas such as the Alpine crossings), etc.;
- **technological targets** include: the uptake of cleaner fuels, emission standards (noise and gases) for vehicles, phase-out of older technologies (e.g. car scrappage schemes, phase-out of Chapter 2 aircraft),
- **environmental targets** include the reduction in emissions of greenhouse gases, reduction in population share subject to noise nuisance, conservation of ecologically important areas.

Targets are set in national and international legislation and policy documents. The EEA recently finalised an 'Inventory of European Policy Environment Targets and Sustainability Reference Values', the findings of which have been brought together in the STAR database. STAR covers the European countries in the EEA area, and is accessible via the Web (<http://star.eea.eu.int/>). For the purpose of TERM, the EEA has extended STAR with an in-depth review of targets related to the transport sector. This review showed that the setting of targets varies significantly between countries, and this may constitute a problem for the implementation of international SEA.

For an SEA at EU level (e.g. **TEN**), the targets of the 5th Environmental Action Programme (5EAP) and its recent review provide a minimum environmental objective and target framework. The White Paper on the CTP also identified a number of priority environmental objectives. The existing (and future) environmental standards of each mode should be taken into account. In addition to that, the designated areas covered by the Directives 79/409/EEC (Birds Directive) and 92/43/EEC (Habitats) and other (inter)nationally conservation areas and biotopes should be incorporated.

For multi-country assessments, national / regional objectives also have to be taken into account, together with legally binding land use and regional development plans. Objectives and targets, and the priority that is attached to those, can differ between Member States and regions. In particular for the assessment of international corridors, this means a consensus will have to be established as regards the core set of objectives and their weights. Consultation on this issue is recommended.

Conclusion: *Carrying out an SEA at international level requires consensus building between countries on sustainability objectives and targets.*

ISSUE 3: TRANSPORT PLANNING PROCEDURES

A major issue which hampers sound international infrastructure planning and assessment is the difference in planning (and assessment) procedures between countries. Countries tend to have a

typically nationalistic approach to transport planning, and co-operation between authorities is often difficult or lacking, even in cases where a trans-boundary infrastructure is concerned. Huge differences in planning procedures exist between countries in terms of duration and phasing, authorities involved, moments where public participation takes place etc. All this makes it extremely difficult to link and international SEA process to planning process in different countries.

Also, national transport planning typically aims at optimising benefits within the country and at minimising environmental impacts on its own territory. This sometimes leads to the worsening of impacts in other countries. This is however also where international SEA has its main value added, as it would help to ensure a better geographic distribution of costs and benefits.

In this context the question can be posed whether international transport planning actually exist, or whether it is limited to adding results of various national planning processes, without the value added of an international strategy. This makes e.g. the development and assessment of plan alternatives extremely difficult.

Again the TEN can be used as an example: the network is very much driven by national master plans, and the Commission has at several points experienced difficulties in compromising different national priorities. The fact that the TEN is a collation of national strategies is, to the author's view, the major factor that is hampering an SEA of the TEN.

Conclusion: *Huge differences in national/regional planning procedures are a major hampering factor for multi-country assessments. This can only be solved by a shift from national planning towards international strategic thinking. The practice of international SEA could stimulate and support the required a change in thinking, but obviously this also requires long term policy changes.*

ISSUE 4: INSTITUTIONAL AND POLITICAL BARRIERS

The current institutional and administrative structure, and in particular the fragmentation of policy responsibilities across transport, environment, energy, finance and regional development ministries/departments and across international, national, regional and local governments, constitutes another major constraint of SEA. A more coherent approach and better inter-institutional co-ordination would help to implement international SEAs.

Added to this there is still the inherent distrust with which many transport ministries still consider SEA, and which is mostly based on the fear that SEA would take over part of their decision making power. This emphasised the importance of raising better awareness of the fundamental purpose of SEA, i.e. that it is a decision-supporting tool, aimed at improving policies and plan rather than opposing those.

Also, in most countries, transport ministries are still divided in modal sectors, with separate planning departments and administrations for road, rail, aviation, inland waterway transport department. A similar organisational structure can be found in international institutions such as the Transport DG of the European Commission. This constitutes a severe barrier against a more integrated multimodal planning (and thus SEA approach), as each administration will generally manage its own budgets, develop independently from others, and with little (sometimes no) co-ordination.

Finally, transport planning is often not as straightforward as theory would have it. Political influences often determine the choice and prioritisation of plans and projects. And such influences are merely

multiplied by several factors in an international context. All these problems become much more enhanced at the international level, and illustrated by the complexity and duration of a planning process such as the TEN, in which 15 Member countries each try to further their own national agenda. Again, an enhancement of environmental assessment at all planning stages could help to break through this, as public participation generally introduces more transparency in the decision-making procedures.

Conclusion: *Institutional and political barriers are also hindering the implementation of transport SEAs. These problems become the more significant for multi-modal SEAs, which require co-operation between road, rail, aviation and other administrations, and for multi-country approaches (as international planning is too often hampered by national interests). Better awareness of the main purposes of SEA should be raised within all involved administrations and inter-institutional co-operation (on national and international level) enhanced.*

REFERENCES

- i EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (1999), SEA in the transport sector, update
- ii DHV (1999), Manual on strategic environmental assessment of transport plans, for DGVII
- iii EUROPEAN COMMISSION (1996), Overview and evaluation of methodologies for the forecasting of induced traffic on new transport infrastructure
- iv EUROPEAN ENVIRONMENT AGENCY (1998), Spatial and ecological assessment of the trans-European Transport Network: demonstration of GIS indicators and methods