This document was noted by Ministers at their Session in Prague on 30-31 May 2000.

The full report will be published during 2000.
STRATEGIC ENVIRONMENTAL ASSESSMENT FOR TRANSPORT
EXECUTIVE SUMMARY

1. ROLE OF STRATEGIC ENVIRONMENTAL ASSESSMENT

Strategic environmental assessment (SEA) is an essential tool for effective decision-making in transport policy development and investment planning. It enables assessment of impacts that go beyond the boundaries of individual projects or unitary planning authorities, and such impacts characterise investments in expanding trunk transport capacity. SEA also functions as an early warning system, identifying potential problems and beginning consultation to resolve conflicts of interest early in the planning process. This reduces the risks of protests late in the day and the high costs associated with the delays that result. In short, effective SEA saves both time and money.

The last decade has seen SEA developed for transport planning in many countries. It builds on the principles and experience of project environmental impact assessment (EIA), which indicate that some level of strategic assessment is necessary to deal with the fundamental choices of transport policy and its links with other aspects of society. Policy choices can not be adequately assessed at the project level. There are also some important environmental impacts that cannot be addressed in a meaningful way by project EIA (for example greenhouse gas emissions). The interaction and cumulative impacts of transport and land use decisions are especially difficult to access through EIA (e.g. impacts on landscape, bio-diversity and road safety).

SEA is most effective when fully integrated into the strategic planning process. For this SEA needs to be tied to each stage of the planning process which leads to a decision. The outcome of the SEA has to be given adequate weight in making investment or regional planning decisions and this has to be done in a way that is transparent. The linkage to a decision will be facilitated by limiting the assessment to what is essential for a decision to be made. Conversely, if there is no planning decision to be made SEA is generally not required.

Nevertheless, SEAs can also provide valuable results when not directly linked to a decision. It is a valuable tool for promoting international and regional co-operation in strategic thinking. Joint SEA is an effective way to resolve national differences in environmental assessment methodologies and in overcoming a narrow national focus that is incapable of balancing environmental costs in one country with costs and benefits in another country. Such differences have on past occasions proved a major barrier to rational joint planning in Europe and between jurisdictions in many OECD countries. Secondly, a pilot

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1 In this context the policies referred to are those drawn up by government administrations, and not electoral commitments made by political parties.
2 The UK has recently embarked upon a programme of Multi-Modal Studies for parts of the trunk road network in which a study of the environmental consequences is to be made.
SEA exercise might prove a valuable testing ground for developing methodologies and expertise in a country where there is no experience of SEA or similar assessment processes in government.

Transport SEA requires effective methods of handling multi-modal issues and addressing potential infrastructure and non-infrastructure measures synthetically. Moreover it requires effective linkages between the transport sector and other sectors to be built into the assessment. As experience in the implementation of SEA accumulates, an increasing divergence from the original pattern of transferring EIA methodology and procedures to the strategic level can be noted in some countries. The most significant aspect is that at the strategic level, environmental goals cannot be considered in isolation and thus SEA tends to develop towards a general strategic assessment, balancing the goals and objectives of mobility, safety, environmental protection and economic development. Opinions are divided on where the boundaries of SEA should be drawn. Most Ministries tend to view the results of SEA as only one of the inputs to making a planning or investment decision. In some countries, separate procedures for assessments of sustainability are being developed and applied to policies as well as to projects, programmes and plans (e.g. review of the transport allocations in the 1997 and 1998 Danish budget proposals).

A strong spatial element is the key to what strictly constitutes an SEA. Regional development land-use master-plans are the ideal basis for SEA as they are developed within an existing decision-making structure. However, even where the scope of SEA is limited to its strict sense, some form of environmental assessment is important for policies (and for programmes without a strong spatial element) in order to ensure compatibility with adopted sustainable development policies. Whatever its scope, SEA demands a commitment to, and definition of, goals that define sustainable development nationally. It is essential to maintain a strong link between any strategic assessment and national goals for sustainability. SEA can influence strategic decision-making only if the decision-makers show a clear commitment to sustainable development in society as a whole.

Co-operation with the public is crucial. Ensuring public involvement in SEA implies effective consultation in the whole strategic planning and policy-making process. If consultation fails, SEA may fail to facilitate the planning process, even when the studies and evaluations made produce high quality information. Achieving effective public involvement is a major hurdle for all countries in making transport investment decisions. SEA can contribute to the continuing need for innovation in this field. Geographic scale is important and radically different approaches to consultation are required for SEA when compared to local project level procedures.

Perhaps most important of all, the results of SEA have to be presented to decision makers in a form that lends itself to influencing their decisions. This implies the information presented has to be simple, precise and to the point.

The use of data also has to be selective to avoid dependence on “computer miracles”. Over-reliance on large data sets can be counter-productive as it is difficult or impossible to control the quality and reliability of inputs into very large data sets and very expensive to update them. Highly aggregated data such as that input into international mapping exercises can be useful in generating some broad indicators of sustainability but are of little use in site related decisions. Multi-layered mapping exercises are very useful in informing alignment decisions but tend to generate output that is too complex for proper consideration in many decision-making environments. Data-driven assessments can mislead particularly when considering uncertain long-term outcomes as they mask the uncertainty. In some cases it will be more productive to follow a primarily qualitative approach based on structured consultation and expert judgements.
2. PROGRESS

On the local and regional level, transport SEA is increasingly integrated with and performed as a part of the land use planning process. The other main focus of transport SEA so far has been on transport corridor assessment. Network assessments at international and national levels are at an earlier stage of development. Within the next few years SEA of policies and legislation with significant implications for the environment and natural resources will become a mandatory procedure in many ECMT and OECD countries. Important progress has taken place on a number of fronts:

- There is increasing experience in the development and testing of SEA procedures and methods, both in the context of sectoral and broad spatial development plans.
- Several countries\(^3\) have already adopted SEA-related legislation.
- There are significant legislative and institutional developments in the European Union:
  - Integration of environmental concerns into sectoral (e.g. transport) policies has become a key priority, as stated in the Amsterdam Treaty, and SEA has been identified as one of the main instruments to achieve this.
  - Final approval of the proposed Directive on SEA\(^4\) is under discussion.
  - There are requirements for SEA of EU policies and legislation.\(^5\)
  - Projects and programmes benefiting from the Structural Funds also require a form of SEA.\(^6\) These requirements are expected to be enforced more stringently in the period 2000-2006.
  - The transport and environment reporting mechanism (TERM) and the assessment of Member States progress towards integration (the Global Assessment) co-ordinated by the European Commission in collaboration with the EEA, will highlight the importance of SEA with particular reference to the transport sector.
- Practical experience of SEA includes the following notable examples:
  - SEA of the east-west motorway in Slovenia for the Ministry of Environment.
  - Environmental assessment of the 1999 Czech National Transport Infrastructure Plan.
  - Agreements between European Union Member States and the Commission have resulted in five pilot SEA case studies related to the Trans-European Network transport corridors:
    - Gothenburg-Jönköping Transport Corridor (Sweden);
    - Trans-Pennine Corridor (United Kingdom);
    - Austrian section of the Danube Corridor (Austria);
    - Road Corridor between port of Ravenna and Venice (Italy);

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3 Including national legislation for Finland, the Netherlands, and Denmark, and regional legislation such as that of Tuscany - Italy, and Castilla y Léon - Spain.
5 See for example: Article 6 of the Amsterdam Treaty; the July 1998 Communication by the Commission to the European Council outlining its strategy for integrating the environment into EU policies; the Commission’s 1993 provisions for the environmental evaluation of plans, programmes and legislative proposals (93/785/EC).
- Corridor Nord - between Paris and Brussels (France/Belgium).
- The Commission, in co-operation with the European Environment Agency, has undertaken a pilot SEA of the multi-modal Trans European Network for transport.
- SEA of the high speed rail network, undertaken in 1992 by the European Commission.
- Environmental assessments of the Seattle long-range transportation plan and the State of Wisconsin transportation plan in the USA.
- SEA for the I-69 International Corridor of Canada-USA-Mexico.
- SEA of the National Development Plan of the Czech Republic, with European Union Phare assistance.

- Several international funding institutions have recognised the need for SEA and are either setting up procedures and guidelines or are investigating the possibilities of doing so. Relevant initiatives can be found in the World Bank and the EBRD amongst others.

3. PRIORITIES FOR IMPROVEMENT

Nonetheless, there are still several important areas for improvement to ensure the successful and effective implementation of SEA. Priority should be given to addressing the following issues.

- Clear political support from governments is required to ensure that the proper weight and role is given to SEA findings when making a final decision over a policy, plan or programme. Political support has to be provided through clear inter-ministerial agreements and instructions.
- The role of SEA in relation to the appraisal of overall sustainability has to be made clear. Effective coordination between the different types of evaluations – economic, technical, social and environmental – undertaken by Ministries and planning authorities is vital.
- Currently the practice of SEA is in most sectors is limited to plan and programme levels. To make the principles of sustainability fully operational, SEA or an equivalent system of appraisal should be developed also at a policy level. This should be done as part of the process of developing policies, rather than as an ex-post test of acceptability. The European Commission is currently looking at ways of assessing the impacts of its policies (including transport policies) through SEA-type methods.
- Attention must be given to ways in which the SEA process can be integrated into transport planning procedures from a very early stage. Creating transparent links between the results of SEA and the infrastructure investment decision to grant or withhold funding is fundamental to this. Launching SEAs late in the decision making process will inevitably result in delays and should be avoided.
- Recruiting and training sufficiently experienced staff to provide the technical support needed by the authorities responsible for the development of policies, plans and programmes for the transport sector will become increasingly urgent. The manual on SEA for transport developed by the Transport Directorate General of the European Commission provides important support.
- Determining appropriate roles for public participation and consultation in strategic planning and developing effective mechanisms for ensuring adequate consultation, particularly with local authorities, is important.
- Resources need to be directed by environment and transport ministries at improving environmental data sets (which are often inconsistent, especially across national borders) and improving the predictive techniques on which SEAs are based. However, spending should be selective and over-
reliance on large data sets avoided for the reasons explained above. Particular attention should be paid to ensuring the traffic forecasts used as input reflect the dynamics of economic development and the influence of fiscal and other policies outside the sector together with the impact of international traffic.

- A coherent SEA strategy for the TEN needs to be developed. SEA of the TEN and its corridors should become an iterative process with continuous communication between all actors involved in the planning process (European institutions, national and regional governments, funding institutions and stakeholders).

- International funding agencies play a crucial role in the development of national and international transport systems. Even though most funding agencies have recognised the need for SEA and are investigating provisions for SEA, in practice environmental assessment is still very much limited to the project level. Practice shows that projects frequently form parts of plans that are only ever assessed in a segmented manner, as each individual project is examined. Introducing SEA principles as part of funding mechanisms would help to overcome this limitation. An example of this can be seen in the application of SEA to the regional plans for European Structural Funds.

- SEA procedures must be efficient. Planning delays have real costs and must be minimised as far as possible. In introducing SEA, opportunities should be sought for streamlining planning procedures rather than simply adding additional layers of bureaucracy.

4. ADDITIONAL PRIORITIES IN CENTRAL AND EASTERN EUROPEAN COUNTRIES AND THE NEW INDEPENDENT STATES

European Union Phare funds have successfully been used to support SEAs of regional development plans in central and eastern European countries. Transport is a key to development policies at the regional government level and this success should be built on, if possible extending assistance to more regions.

The European Union Transport Infrastructure Needs Assessment (TINA) programme presents the best immediate opportunity to develop SEA experience in the region and more fundamentally raises a clear need for such an assessment. Ideally countries along pan-European transport corridors along which TINA projects have been nominated should co-operate to undertake joint SEAs. The results should help shape the eventual selection of projects for financial support from European Union and international finance institution funds and contribute to improving the design of the projects and the overall development of the transport corridors. Further east, the new independent states need to co-operate in a similar way to undertake joint SEAs for transport corridors and the transport development regions identified at the 1998 Helsinki Conference. The recent Trans European Network transport corridor studies, co-funded by the European Commission, can provide methodological guidance.

5. TRANSPORT MINISTRIES’ RESPONSE

National governments must develop the necessary capability and expertise to undertake adequate SEAs. This implies that governments will have to establish central SEA units to support the overall

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8 Decision No. 1692/96/EC.
development of SEA and its linkages to national sustainability policies. At the same time, Transport Ministries will need to develop their own expertise on transport-related SEA procedures and methodology.\(^9\)

International exchange of information on the experience of SEA in practice should help accelerate the learning process and ensure compatibility between national approaches when assessing infrastructure decisions with an international dimension. Joint SEAs between Ministries in neighbouring countries is the most effective way to achieve this.

Without the clear political support and transparent integration of SEA results into decision making recommended, there is a risk that money is wasted on appraisals that are not subsequently fully utilised. Weakness in terms of institutional linkages between Ministries and between different departments (road, rail, aviation, etc) within Ministries (and indeed in the European Commission) increases the risk. All countries are exposed to this risk, but the exposure is probably greatest in the newer Member countries where government resources are most limited and where the transport sector is entering a period of rapid change with a great many investment plans that have major strategic implications. When SEA is successfully incorporated into the decision making process it should help avoid wasted expenditure and at the same time speed up decision making by helping to avoid the lengthy and costly delays that often result when strategic issues are raised only late in the planning process.

SEA methodologies are undergoing rapid development in many western European countries in response to a clearly perceived need in government to improve the planning and decision making process. The need is as pressing in central and eastern European countries, even if sometimes less clearly perceived. Development of cost-effective SEA methodologies should, therefore, be given priority by governments in the region. SEA should facilitate rather than delay decisions on the investments that are expected to transform the transport sector, and particularly the road network, and help in ensuring that the investments made are sustainable and strike the best balance possible to fulfil social and economic development goals and ensure environmental protection. The proper role of government is as honest broker rather than advocacy.

6. **RECAPITULATION**

Among the conclusions discussed above, four stand out:

- Link SEA clearly to the planning process leading to an investment decision and begin it early.
- Keep the output of SEAs simple and to the point to maximise the impact on decision-makers.
- The only way to develop effective SEA methodologies and procedures is through practice.
- SEAs along pan-European corridors should be undertaken in conjunction with the TINA programme.