

# SEA & Transport Planning

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## CONTENTS

- **Introduction to the Newsletter**
  - [Who Subscribes?](#)
  - [Reactions to the Newsletter](#)
  - [The Next Edition](#)
- **Regulatory Processes for SEA and EIA**
  - [SEA Experience in Ireland](#)
  - [Common Position on New EIA Directive](#)
  - [Environmental Noise Directive](#)
- **Procedural Studies on SEA**
  - [Is SEA all it's Cracked up to be?](#)
  - [Current Practice in the SEA of Development Plans in England](#)
  - [IEMA Strategic Environmental Assessment Seminar](#)
  - [South West Regional SEA Project](#)
  - [SEA Should Improve Planning Methodologies and Support Project Level Assessments](#)
  - [Communication from the European Commission on Impact Assessment](#)
- **Transport Planning in England**
  - [Select Committee on Transport Study on Multi-Modal Studies](#)
  - [UK Government Consults on Airports Policy](#)
- **European Transport**
  - [Analytical Strategic Environmental Assessment](#)
  - [Expanding the Capacity of the Port of Rotterdam](#)
  - [EU Parliament Calls for SEA on TEN](#)
  - [Challenges of Implementing the SEA Directive by the European Regions](#)
- **Guidance and Techniques**
  - [Cost 350](#)
  - [Aggregating Environmental Indices](#)
  - [Swedish Guidebook for Environmental Assessment in the Planning of Transport Systems](#)
  - [Transport Planning Resource Guide](#)
  - [UK Treasury Consultation on Appraisal Practice](#)
  - [Surrey Makes Planning Easier](#)
- **Environmental Valuation**
  - [Applied Evaluation of Biodiversity](#)
  - [Environmental Benefit/Cost Assessment System](#)
- **Health Impact Assessment**
  - [Impact of Transport on Health](#)
- [An Air Quality and Health Impact Assessment of Urban Road User Charging](#)
- [Air Pollution and Health Information Pack](#)
- [Health Impact Assessment – Ready for Use?](#)
- **Transport Planning and the Environment**
  - [Sustainable Freight Transport](#)
  - [Guidelines for the Selection of Snow and Ice Control Materials](#)
  - [Environmental Streamlining and Stewardship](#)
  - [Low-Impact Development Design and Construction Manual for Transportation Systems](#)
  - [Designs and Guidelines for Safe and Aesthetic Urban Roadside Treatments](#)
- **Training**
  - [Central Eastern University SEA and Transport Planning Training Course](#)
- **Publications**
  - [OECD Publications](#)
  - [European Conference of Ministers of Transport Newsletter](#)
  - [Victoria Transport Policy Institute](#)
  - [Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects](#)
  - [Guidance for Selecting Compensatory Wetland Mitigation Options](#)
  - [Environmental Information Management and Decision Support System for Transportation](#)
  - [Economic Valuation with Stated Preference Techniques](#)
  - [Vehicle Operation and Road Traffic Noise](#)
  - [Health, Urban Traffic and SCOOT](#)
  - [Transport Elasticities Database](#)
  - [Transport and Sustainable Rural Livelihood in Zambia](#)
- **Organisations and Fora**
  - [IAIA](#)
  - [The Association of Italian Cities for Sustainable Mobility](#)
- **Future Events**
  - [Conference on Good Practice in Integration of Environment into Transport Policy](#)
  - [Environment & Transport 1st International Scientific Symposium – Avignon](#)
  - [IAIA – Marrakech June 2003](#)
- **Web-Sites**
- **Contributors**

TRL Limited is the editor and publisher of this Newsletter. TRL is a provider of transport research and consultancy advice. ECMT is the European Conference of Ministers of Transport and has kindly provided support to the launch of this Newsletter.

## **INTRODUCTION TO THE NEWSLETTER**

This Newsletter is the fourth in the series aimed specifically at the following audiences involved with strategic environmental assessment and transportation planning:

- Government officials responsible for transportation policy;
- Local government officers involved in formulating Transport Plans;
- Transport providers, both infrastructure and services;
- Transportation and environmental consultants;
- Amenity bodies.

All copies of the Newsletter and other materials on SEA can be accessed via the TRL website [www.trl.co.uk](http://www.trl.co.uk). From the main page, select environment then publications from where the SEA Newsletter registration page can be found.

### ***Who Subscribes?***

Approximately 230 people have subscribed from across the world. The UK provides about half of the audience with Germany being the next largest audience. There are over 170 subscribers from the European Union Member States, with a further 9 from central and eastern European states. Subscribers to the Newsletter also come from Africa, South East Asia and Nepal as well as the US and Canada.

In terms of the status of the subscribers about a quarter are within governmental organisations, a third from consultancy with the remainder being from research organisations and academia.

### ***Reactions to the Newsletter***

Comments of support for the Newsletter continue to be received. Thank you.

Following the website questionnaire, it is clear that the readership would like coverage to be extended beyond SEA and transport planning to include EIA and transport projects. Social impact assessment, economic appraisal and health impact assessment should also be considered where they relate to transport. There was also a desire expressed to include conference announcements in future.

To make this happen will require your assistance and so we shall look forward receiving articles on EIA and conference announcements for future editions.

## ***The Next Edition***

The next edition is programmed for January 2003 and hence the Editor welcomes short articles of around 500 words during December 2002. TRL reserves the right to edit the articles submitted.

In future editions the following themes will be given particular emphasis:

- Strategic Environmental Assessment methods;
- Transportation modelling;
- Public involvement;
- Environmental indicators and targets;
- Cumulative Effects Assessment;
- Health Impact Assessment;
- Social preference surveys.

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## **REGULATORY PROCESSES FOR SEA AND EIA**

### ***SEA Experience in Ireland***

Ireland has had some experience of undertaking environmental assessments at the national policy level but this experience has not been transferred down to the regional or local levels of government. The Department of Environment and Local Government has commissioned Eco-Audits of the National Development Plan 2000-2006 and of other Operational Programmes for investment in infrastructure to meet development needs. There have also been heritage appraisals undertaken on several county development plans and a strategic assessment of marine and coastal seas strategies. Each of these strategy-level assessments was however, undertaken during the preparatory stages of the SEA Directive and did not incorporate many of its requirements.

The transport sector has not featured in those sectors that have undergone a type of SEA. However, Ireland has adopted a strategic approach to transport infrastructure into which the concepts and methods found in SEA will become integrated.

The Eco-Audit of the Operational Programmes and the National Development Plan 2000-2006, in addition to a preliminary SEA of the draft National Spatial Strategy reflects the Government's strategic way of approaching the development of the State's growth centres and transport corridors. More recently, a strategic review of rail services across the country has been started by the Department of Transport that will contribute to a broader national study on the implications future railway network in Ireland.

The land use planning sector has already received attention in terms of integrating environmental concerns

at strategic levels. The Irish Government incorporated specific requirements for the SEA of specific land-use plans within the Planning and Development Act, 2000. Under the Act, Development Plans, Local Area Action Plans and Regional Planning Guidelines are required to contain information “*on the likely significant effects on the environment of implementing the plan*”.

Similarly, Planning Schemes for Strategic Development Zones will also have to undergo a form of SEA, although the Act requires that the information to be provided is the same as that for project-EIAs. It is likely, therefore, that the land-use planning sector will be the first sector to focus on how to address the issues raised by the SEA Directive in order to meet the requirements of the Planning and Development Act, 2000.

There is much to be done in order to prepare Irish authorities to comply with the SEA Directive. While Ireland has been criticised on the implementation of the EIA Directive and the Habitats Directive this should not prevent SEA practitioners from preparing and testing SEA tools and methods in order to meet the requirements. Early research, capacity-building, training and piloting of SEA systems and practice over the forthcoming 12 months is seen as critical to the effective implementation of the Directive and, thereby, maximising the inherent benefits to be accrued from the systematic assessment of the implications of proposed plans and programmes.

Contributor: [Paul Scott](#)

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### ***Common Position on New EIA Directive***

On 25 April 2002, the Council adopted its Common Position to incorporate the principles of the UN/ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (‘the Århus Convention’ into the Directive 85/337/EEC (as amended).

The purpose of the draft Directive<sup>1</sup> is to introduce or to improve this type of public participation in relation to:

- Certain plans and programmes in the environmental field referred to in Annex I to the draft Directive;
- The projects referred to in Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (the ‘EIA Directive’);
- The permits for large industrial activities regulated by Council Directive 96/61/EC on integrated

<sup>1</sup> <http://europa.eu.int/eur-lex/en/dat/2002/ce170/ce17020020716en00220036.pdf>

pollution prevention and control (the ‘IPPC Directive’).

Article 3 of the draft Directive aims at complementing Directive 85/337/EEC, which already contains some provisions on public participation. The draft Directive inserts a definition of ‘public concerned’ which includes non-governmental organisations promoting the protection of the environment.

The new Article 6 on informing and consulting the authorities and the public specifies type of information to be made available and basic procedural arrangements for informing and consulting the public.

The amended Article 7 adapts the procedures for transborder consultations to the requirements of the Århus Convention so that affected Member States may participate not only in the environment impact assessment procedures, but also in the environmental decision-making procedures referred to in Article 2(2).

Article 9 addressing informing the public of the decisions taken was modified in order to inform the public in a Member State affected by a project having transboundary implications.

A new Article 10a provides for judicial review against decisions, acts or omissions subject to public participation.

A new paragraph 22 broadens the scope of the Directive to cover changes or extensions to existing installations that in themselves meet the thresholds fixed by the other parts of Annex I to Directive 85/337/EEC.

Contributor: [Paul Tomlinson](#)

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### ***Environmental Noise Directive***

Directive 2002/49/EC<sup>2</sup> on the assessment and management of environmental noise was issued on 25 June 2002. The Directive provides the foundation for extending Community measures addressing noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery, and for developing additional measures, in the short, medium and long term.

The Directive requires the following to be implemented in a progressive manner:

- Determination of exposure to environmental noise, through noise mapping, by methods of assessment common to the Member States;

<sup>2</sup> [http://europa.eu.int/eur-lex/en/dat/2002/1\\_189/1\\_18920020718en00120025.pdf](http://europa.eu.int/eur-lex/en/dat/2002/1_189/1_18920020718en00120025.pdf)

- Ensuring that information on environmental noise and its effects is made available to the public;
- Adoption of action plans by the Member States, based upon noise-mapping results, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental noise quality where it is good.

By 18 July 2005, Member States are to inform the Commission on any relevant limit values in force within their territories or under preparation. Such limit values are to be expressed in terms of  $L_{day}$  and  $L_{night}$  and where appropriate,  $L_{day}$  and  $L_{evening}$ , for road-traffic noise, rail-traffic noise, aircraft noise around airports and noise on industrial activity sites, together with explanations about the implementation of the limit values.

Member States have until 30 June 2005 to inform the Commission of those circumstances where noise maps are to be prepared prior to 30 June 2007. These circumstances include all urban areas with more than 250,000 inhabitants as well as major roads with more than six million vehicle passages a year, major railways with more than 60,000 train passages per year and major airports. Then no later than 18 July 2008 the competent authorities are to prepare action plans to manage noise issues and effects including noise reduction if necessary.

No later than 31 December 2008, Member States shall inform the Commission of all urban areas, major roads and major railways, with 30 June 2012 being set as the date when strategic noise maps are to be prepared. Action Plans are to be prepared before 18 July 2013.

Strategic noise maps are to be reviewed, and revised if necessary, at least every five years after the date of their preparation.

While the Directive applies to built-up areas, in public parks or other quiet areas in an agglomeration, it also applies to quiet areas in open country, near schools, hospitals and other noise sensitive buildings and areas.

Contributor: [Paul Tomlinson](#)

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## PROCEDURAL STUDIES ON SEA

### *Is SEA all it's Cracked up to be?*

There is a danger that SEA will not deliver the anticipated benefits particularly when it is may be seen as another administrative burden that gets in the way of preparing a plan or programme. Equally, unless, the SEA process is able to inform the plan/programme making process and deliver useful information to

decision-makers in a manner that they can use, then its future is bleak.

There is a need to head-off many preconceptions about what SEA is and is not as well as how it should be integrated into existing procedures rather than be brought in as an additional and unwanted activity.

Among the common questions raised by those likely to be faced by SEA are the following:

- Will SEA alter the time taken to make decisions?
- What legal fall-out will result from SEAs that are not robust or founded on poor science?
- To what extent will SEA provide an improved structure to existing assessments of plans and programmes or does it impose new requirements?
- How is the SEA to be integrated into the multiple stages in plan preparation rather than becoming a post-hoc assessment?
- How can SEA be applied in a step-wise manner to focus effort where it is needed?
- How can we streamline project EIAs through the SEA process in transport planning?
- To what extent will SEA identify issues that would otherwise result in abortive expenditure on projects?
- Can cumulative effects assessment result in responsibilities being passed to individual projects?
- Who should be responsible for cumulative effects mitigation and monitoring?

Contributor: [Paul Tomlinson](#)

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### *Current practice in the SEA of Development Plans in England*

The EIA Centre at the University of Manchester is undertaking research into whether the current practice of SEA in England results in environmentally beneficial changes to development plan objectives and policies.

The first stage of the research is a questionnaire survey to determine how SEA has been utilised in the plan making process within each English plan-making authority. The second stage involves an analysis of 25 case study planning authorities and will analyse specific and detailed experience with both environmental appraisal (EA) and sustainability appraisal (SA), with a view to following the appraisal and plan preparation processes from beginning to end. From both stages of the research conclusions will be drawn and improvements suggested to appraisal practice in advance of the European Union SEA Directive coming into force.

The first stage of the research has been completed and all plan-making authorities in England have been sent a questionnaire on practice in appraisal. A response rate

of 79% has been achieved, with 348 responses from the 440 questionnaires having been returned.

The vast majority of respondents had undertaken some form of appraisal (82%) and had found it worthwhile (87%). A quarter of respondents asserted that EA/SA assisted them in understanding sustainable development issues within their areas, with another fifth stating that it also assisted them in understanding their environment and how planning policy impacts upon it. A fifth of respondents mentioned that EA/SA helped fine tune planning policy, with another 10% stating that it assisted them in liaising with statutory consultees and members of the public.

However, more than two-thirds of respondents (71%) stated that the appraisal had little or no influence on development plan objectives and policies. Furthermore nearly two-thirds (61%) believed that their plan would have developed in the same manner without any appraisal having been undertaken.

Respondents were asked to suggest recommendations on how the effectiveness of appraisal processes could be improved. Over a third believed that the appraisal process should be started earlier in the plan preparation process with enhanced dissemination of best practice, new appraisal guidance and increased training. Few authorities however, referred to greater consultation and public participation as being important (13%), and increased flexibility in the appraisal process was mentioned by only 8% of respondents.

The results of the first stage of the research show a broadly positive outlook towards SEA and show added benefits to the process additional to assessing the core environmental impacts of the plan. However, it is clear that there remain major procedural weaknesses and concerns about the manner in which the SEA processes are implemented. The second stage of the research will examine the issues raised by stage one in greater detail, and explore underlying reasons for current practice and propose how this might be compared.

Contributor: [Michael Short](#)

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### ***IEMA Strategic Environmental Assessment Seminar***

A meeting of the Institute of Environmental Management and Assessment (IEMA) South West branch was held in July 2002 to inform the members of a pioneering South West project on SEA and discuss the future implications of the directive.

The afternoon started with a series of speakers including a representative from ODPM who are responsible for implementing the directive in the UK. Some important

future challenges for SEA were discussed including the need to find a way to integrate the existing regime of sustainability appraisals with the new SEA regime. There is a need to find methodological consistency and consensus. This consensus should be helped by the fact that the ODPM is producing guidance on SEA of land use plans, which is likely to be published in September 2002.

Speakers from the Regional Assembly, TRL and Devon County Council discussed the South West SEA project set up to more clearly define the potential for SEA within the South West, examine the barriers that organisations may face when implementing the directive and establish good practice within the region. The different phases of the project were discussed including phase 1 which has already been completed (research on availability and usefulness of baseline environmental data in the South West – carried out by TRL) and phase 2, which will involve different organisations piloting approaches to SEA.

Perhaps the most interesting part of the afternoon was the group discussions on the barriers to implementing the directive. Some of the main points raised were:

- Who is going to fund the consultancy work? SEA is unlike project EIA where it is carried out by a developer who meets the cost. The process needs earmarked resources within authorities.
- The possibility of large numbers of legal challenges both by developers if their sites aren't included in the plan and also by environmental pressure groups;
- Idea for a 'SEA Project Leader' taking a project management approach to conducting the SEA calling in on specialist teams/experts.
- The importance of cascading SEA indicators down plan levels. When will an EIA become a SEA?

Full notes of the proceedings can be found on the IEMA website [www.iema.net](http://www.iema.net).

Contributor: [Emma James](#)

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### ***South West Regional SEA Project***

With the aim of maximising the effectiveness of SEA in the South West of England TRL, working in conjunction with Collingwood Environmental Planning, were commissioned to examine the baseline data needs of the SEA Directive and the availability of such data in the South West of England.

This research funded by the South West Regional Assembly, the Environment Agency, the DTLR and various local authorities as partners

The study considered the differences in scope between environmental appraisal, sustainability appraisal and

strategic environmental assessment as applied in the UK. It was observed that a greater “depth” of assessment underpins the baseline data needs for SEA when compared with existing appraisal practice. Indeed, the Royal Commission on Environmental Pollution (RCEP) recently highlighted the lack of quantification in sustainability appraisal and the ‘poor science’ in their environmental analyses. The Commission observed that *“the sustainability appraisal process does not need ‘base-line’ environmental studies as strategic environmental assessment does”* (RCEP, 2002, page 98).

The following three-tier classification was used in the study to characterise plans and programmes and the types of proposals that they might contain:

- *Policy-orientated* – overarching data baseline data for considering policy proposals that are generally not location-specific (e.g. Regional Planning Guidance);
- *Area-wide* - broad characterisation of the entire study area to consider location-specific proposals within a wide geographic extent (e.g. Local Development Plans);
- *Specific Zones (or “hotspots”)* – where more detailed assessment may be required to consider local proposals (e.g. corridors within Local Transport Plans). These proposals may be identifiable as projects which, if they proceed, will subsequently require project level EIA.

The study concentrated on 25 plan/programme types promoted by local and regional government and non-departmental government bodies that will be covered by the SEA Directive. The study also investigated the current availability of datasets in the South West Region that may be of use in undertaking plan/programme SEA and compiled metadata (i.e. “data about data”) for those datasets of potential use in plan/programme SEA. In this way the work is hoped to provide a starting point from which a comprehensive database can be assembled and updated by emerging data sharing networks.

Some of the main conclusions of the study were that:

- Data availability and coverage is generally improving, perhaps in response to the increase in reporting and assessment/appraisal activity at all levels.
- Data availability in terms of quality and coverage will never be perfect. One means to compensate for this is to involve stakeholders with a wide range of backgrounds and perspectives in the plan/programme assessment process.
- Interpretation of Article 5(2) of the SEA Directive on what is “reasonable” information to include in a SEA Environmental Report is of critical importance in driving data needs for SEA.
- Assessment methodologies should drive the data assembly process rather than the other way around.

- Existing data sets may be at an inappropriate scale or at too high a level of aggregation to inform the assessment of “area-wide” plan/programme proposals.
- There is little experience of post-decision monitoring for plan and programme SEA from which to draw lessons in implementing the Directive.

The study report is available on the SWRA website: [www.southwest-ra.gov.uk/subgroups/Strategic%20Environmental%20Assessment%20Directive/SWRA%20SEA%20Report%2011.pdf](http://www.southwest-ra.gov.uk/subgroups/Strategic%20Environmental%20Assessment%20Directive/SWRA%20SEA%20Report%2011.pdf)

Contributor: [Chris Fry](#)

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### ***SEA Should Improve Planning Methodologies and Support Project Level Assessments***

Thomas Fisher has earlier in this newsletter (Dec. 2001) identified three tiered levels of SEA for the transport sector. As the programme level is closest to the project level I would like to discuss the environmental benefits of analysing environmental consequences and preparing environmental assessments for SEA at that level.

Will we save or improve the environment and will we facilitate EIA at project level if we undertake SEA for transport programmes?

Firstly, it depends on the content of the programme and the planning activity that it is based on. Where identification of actions and possible projects are dealt with, then there is an important environmental concern. This concern is expressed in the choice of measures or of various combinations of measures, infrastructure and non-infrastructure measures, (hopefully with multi-modal and inter-modal considerations). In this context SEA is meaningful.

However, if the process is limited to discussions and assessments on priorities in time between defined projects then there few benefits result from SEA. The environment it is not an important consideration if an ecosystem of biodiversity interest or a recreation forest disappears at year three or year five of the plan. Projects may drop to the bottom of the list and be excluded from the programme. However such projects often come back later without major revisions.

Secondly, it depends on if the SEA would be a support to EIA at projects level.

EIA for road projects should summarise how strategic level environmental issues have been dealt with before the project planning and EIA started. It should also detail how the project was conceived, why the problems should be solved by a road project and not by traffic management or rail improvement etc. The Swedish

experience is that approaches to SEA for traditional programmes with listed priority projects do not answer such difficult issues.

Thirdly, there is a risk of too much assessment, where SEA has been applied at a level above traditional programme level.

The experience from Sweden is that EIA for road projects has led to an improvement of the content of the planning steps at project level. However the changes in legislation two years ago has led to an over emphasis on bureaucracy for many small projects.

The environment and the support to EIA at project level would benefit if the planning at strategic level could become a more continuous process with analyses, goals, strategies and problem solving at strategic levels. Ideally, this is not something that should be done under great time pressure every fifth year or so. The UK guidance on Multi-Modal Studies seems to be a most useful approach in this direction.

Contributor: [Inga-Maj Eriksson](#)

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### *Communication from the European Commission on Impact Assessment*

In May 2002 the Commission announced that it intends to launch impact assessment as a tool to improve the quality and coherence of the policy development process in order to deliver a more coherent implementation of the European strategy for Sustainable Development.

The communication explains how the process of impact assessment will be implemented in the Commission, gradually from 2003, for all major initiatives, i.e. those presented in the Annual Policy Strategy or later in the Work Programme of the Commission.

Impact assessment is intended to integrate, reinforce, streamline and replace all the existing separate impact assessment mechanisms for Commission proposals. It will integrate existing requirements for business impact assessment, gender assessment, environmental assessment, small and medium enterprises assessment, trade impact assessment, regulatory impact assessment etc. In this way the quality and coherence of policy design can be improved while also increasing transparency, communication and information on the Commission's proposals.

The new streamlined method will be introduced gradually, with the flexibility to accommodate the difference between the various types of policy initiatives. Impact assessment will be applied to the major initiatives presented by the Commission in its Annual Policy Strategy or its Work Programme, be they

either regulatory proposals or other proposals having an economic, social and environmental impact. However, certain types of proposal will normally be exempt from the impact assessment procedure. This would include proposals like Green Papers where the policy formulation is still in process, periodic Commission decisions and reports, proposals following international obligations and executive decisions, although, in some instances the Commission may decide to undertake an impact assessment.

The Commission proposes a preliminary assessment to give an overview of the problem identified possible options and sectors affected. This will result in a short statement focusing upon:

- Identification of the issue / objectives and desired outcome;
- Identification of the main policy options available to achieve the objective, taking into account proportionality and subsidiarity considerations, and preliminary indications on expected impact;
- Description of the preparatory steps already undertaken and foreseen; (consultations of interested parties, studies), and indication of whether an extended impact assessment is needed.

The preliminary assessment must be established early in the policy formulation process and the decision to require an extended impact assessment is to be based on the following criteria:

- Whether the proposal will result in substantial economic, environmental and/ or social impacts and whether significant impact occur to major interested parties;
- Whether the proposal represents a major policy reform in one or several sectors.

The extended impact assessment is to:

- Undertake an in-depth analysis of potential impacts on the economy, on society and on the environment;
- Consult with interested parties and relevant experts, with the main results being summarised in the impact assessment report.

The extended impact assessment is to consider how to assemble information needed to answer key questions:

- What issue is the policy/proposal expected to tackle; what would be the Community added value;
- What main objective is the policy/proposal supposed to achieve;
- What are the main policy options available to achieve the objective;
- What are the impacts – positive and negative – expected from the different options;
- How can the results and impacts of the policy/proposal be monitored and evaluated.

Where it is not possible to assemble all relevant data within a reasonable timeframe, qualitative or partial data will be used. In such cases an interim and/or ex-post evaluation must be explicitly foreseen at the latest to inform the next review of the legislation. See: [http://europa.eu.int/comm/press\\_room/presspacks/pdf/276-4en.pdf](http://europa.eu.int/comm/press_room/presspacks/pdf/276-4en.pdf)

Contributor: [Paul Tomlinson](#)

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## **TRANSPORT PLANNING IN ENGLAND**

### ***Select Committee on Transport Study on Multi-Modal Studies***

The House of Parliament Transport Committee has decided to undertake an inquiry into the Multi-Modal Studies following the completion of the first tranche of studies.

The Committee will be examining:

- Was the approach to selecting the areas and scale of the studies appropriate and consistent, and how far have the studies looked ahead?
- How much the studies have cost and are they good value for money?
- What is the expected cost and how affordable are the schemes that are being recommended?
- Have the studies been based on realistic forecasts of growth in traffic and how effective are measures intended to reduce the need to travel?
- Has a consistent approach been taken over the need for and benefits of new ways of charging for transport?
- How different are the recommendations these studies are bringing forward compared with previous transport policy? Have the studies taken a balanced approach to all modes?
- Are the studies producing recommendations that are consistent with Government policy, particularly the 10 Year Plan and the SRA Strategic Plan?
- How effective will the schemes proposed by the studies be in promoting regeneration?
- How can all of the different agencies responsible for achieving the different recommendations from the studies be co-ordinated to ensure a balanced set of projects are completed?
- What are the main political, institutional, financial and planning barriers to implementing the studies?
- How can the multi-modal study process be improved?

Unfortunately the Committee has not decided to look explicitly the implications of the SEA Directive on transport planning or Multi-Modal Studies, nor the relationship with project level assessment.

Contributor: [Paul Tomlinson](#)

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## ***UK Government Consults on Airports Policy***

Passenger air travel has been growing at around 6% per year, and freight at about 5%, faster than growth in GNP. Forecasts are that it will more than double or treble over the next 20 years. With about £7.4 billion being contributed to the UK economy by aviation and about 20% of all international air passengers in the world beginning or ending a journey at a UK airport, the future of aviation is of strategic importance to the government.

For these reasons the government has embarked on a consultation exercise to consider the potential implications of the anticipated demand for air services and infrastructure alongside the potential impacts of such infrastructure. A series of seven consultation documents have been issued and mark a stage along the development of a White Paper on air transport. The main consultation documents can be found at: [www.airconsult.gov.uk](http://www.airconsult.gov.uk)

Technical reports of the methodologies and option studies for the Midlands and South East can be found at respectively:

[www.aviation.dft.gov.uk/consult/airconsult/midlands/technical/index.htm](http://www.aviation.dft.gov.uk/consult/airconsult/midlands/technical/index.htm)

[www.aviation.dft.gov.uk/consult/airconsult/se/technical/index.htm](http://www.aviation.dft.gov.uk/consult/airconsult/se/technical/index.htm)

Contributor: [Paul Tomlinson](#)

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## **EUROPEAN TRANSPORT**

### ***Analytical Strategic Environmental Assessment***

The Analytical Strategic Environmental Assessment (ANSEA) project is a research project financed under the 5th Framework Research Programme of the European Union (DG Research and Technological Development of the European Commission) which started in March 2000 and concluded in February 2002.

It was undertaken by a consortium of eight European institutions from seven different countries: TAU Consultora Ambiental (Spain) as the Leading Partner; Environmental Resources Management (UK); Fondazione Eni Enrico Mattei (Italy); Foundation of the Faculty of Sciences and Technology of the New University of Lisbon (Portugal); Universidad Politécnica de Madrid, Escuela Técnica Superior de Ingenieros de Montes (Spain); International Institute for the Urban Environment (The Netherlands); Stockholm Environment Institute (Sweden) and Wuppertal Institute (Germany).

The aim of the project is to provide an enhanced theoretical and methodological background for Strategic Environmental Assessment (SEA). It was also to provide a framework for assisting the implementation of European SEA Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment) and national procedural requirements in this area.

The overall objective of the ANSEA project was to develop a SEA approach and framework to ensure the sound integration of the environmental dimension into decision-making processes at a strategic level, i.e. in the formulation of policies, plans and programmes. To achieve this, the project had three main objectives.

The first objective was to develop a sound theoretical basis for a decision-centred SEA. A book is being produced on the theoretical concepts and framework for an Analytical Strategic Environmental Assessment approach.

The second objective was to test and validate the approach by testing its applicability in diverse institutional and decision-making contexts across Europe. Case studies from seven EU countries were carried out as well as a review of SEA experiences in two additional countries.

Third objective was to carry out dissemination activities to reach both the scientific and professional audience and the main users in public administrations. The outcome of the project has been a public symposium on its results, an ANSEA web page and a book on the theoretical concepts and framework for an Analytical Strategic Environmental Assessment methodology that will be published soon.

The ANSEA project developed an approach to environmental assessment based on decision-making to ensure the integration of environmental values through a series of methodological steps. While SEA methods often focus the prediction of potential environmental effects of proposed PPPs, the ANSEA framework concentrates on ensuring that the critical decision points in the decision-making process are met coherently with environmentally relevant procedural criteria, to maximise environmental integration in decisions.

Thus, it is suggested that ANSEA be considered complementary to the other SEA approaches. Its application, alone or in conjunction with a standard SEA, will strengthen the environmental quality of the final decisions.

The Symposium was organised by FEEM and held in its headquarter in Milan in February 2002. The first aim of the initiative was to present the outcomes of the two years EC project "Analytical Strategic Environmental

Assessment". A second aim was to create an opportunity for a wide debate on SEA experiences in Europe.

The workshop hosted over 60 European and extra-European attendants and about 50 Italian participants. Participating organisations consisted mainly in universities, public authorities, national and international environmental and planning institutions, and research institutes.

The Symposium was structured over three sessions grouping three or four contributions each. The first session was conceived for addressing mainly the EC Directive 2001/42/EC on SEA and for sketching the state of the art on SEA experiences in the hosting country. The following session focused on the ANSEA approach, the developed instruments and one of the case studies. The third session was centred on the perspectives of experienced researchers, members of the ANSEA Scientific and Advisory Boards. The Symposium was concluded by a round table discussion, providing participants with the opportunity to share ideas and freely discuss on the concepts and tools proposed during the event.

In June a workshop on the ANSEA approach was held within International Association for Impact Assessment annual Conference (IAIA '02) in The Hague, The Netherlands.

More detailed information on the project and on the concluding symposium are correspondingly available on the official web-site of the project and on the FEEM web-site:

[www.taugroup.com/ansea](http://www.taugroup.com/ansea)  
[www.feem.it/web/attiv/\\_conf.html](http://www.feem.it/web/attiv/_conf.html)

Contributors: [Pietro Caratti](#) and [Rodrigo Jiliberto](#)

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### *Expanding the Capacity of the Port of Rotterdam*

In 2002, the Dutch Parliament (House of Commons) has decided that a second, 2500 hectares land-reclamation will be built in the North Sea to extend the capacity of the port of Rotterdam to receive deep-sea containerhips and to host chemical industry. The losses of natural area are compensated through large-scale development and protection of other coastal areas. In the same spatial decision, a list of measures is adopted to improve the quality of living and working in the port area, and a site has been designated to locate 750 hectares of new nature and recreational area. Also in 2002, a covenant between governments and private parties has been signed, to ensure the financing of these projects.

This was achieved after one of the most expensive planning and assessment processes in The Netherlands; in the period 1997 - 2002, EUR 40 million was used. It

was also a unique process for The Netherlands, since the main lines of the national spatial decision have been negotiated between NGOs and local governments.

The process started earlier, however, in the port itself, where in 1993 a covenant was signed between 23 parties in the port area. A study into a second land-reclamation was part of this, as well as 750 hectares of new nature and measures for a general improvement of the port environment. About 1995, the Cabinet assumed responsibility for this process, since a national spatial decision was required, and part of the financing would probably have to come from the state budget. It organised a wide societal discussion about the land reclamation, which gave a clear view on all perceived interests and emotions about this project, but it gave no sound arguments about the net social benefit of the project. Therefore, in 1997, Cabinet established a Project Bureau, with interned administrators from five ministries and two local governments. This Bureau managed a research and negotiation process, which was structured by the so-called PKB+/EIA procedure. This is a procedure for spatial planning, merged with a procedure on EIA. In addition to this, a social cost-benefit analysis was drawn-up under the responsibility of formally assigned research institutes, and a dedicated high-level committee.

Central to the project was a double objective: to meet any shortages of space in the port, whilst improving the quality of living. Alternatives were developed and compared on their net social cost-benefit, and on their wider environmental impacts. For example, for the port capacity, several economic scenarios were developed, and the possibility of meeting demand through intensified use of the existing port, using ports in other parts of The Netherlands, and land-reclamation was considered. The objective of the Cabinet was that the projects were to be co-financed by private enterprises. Also, several national budgets would have to contribute (in particular transport and nature). The cost-benefit analysis was intended to give arguments for such a distribution of costs.

The project bureau approached its task by doing research and by assigning consultation groups with many NGOs. Cabinet made any decisions in this project. However, this process was difficult, because the financing of the implementation projects was linked to the spatial planning decisions, which resulted in high complexity.

In 2000, therefore, the chairman of the Advisory Commission of the project, Hans Alders (former Minister of Environment), advised the minister who managed the project, to separate these elements. He advised to proceed first by asking the advice of a broad selection of economic, environmental and social NGOs and local government about the spatial decision. This group succeeded, under neutral chairmanship of Hans

Alders, who was assisted by DHV Management Consultants, in negotiating an agreement on main lines. This agreement formed the basis of the proposal developed by Cabinet.

In hindsight, it probably can be said that the process as a whole could have been more efficient. The Social Cost-Benefit Analysis has an important but still unclear position. There is significant controversy about the usefulness of formal assessment procedures, like EIA. Opponents argue that if the process is governed right (with a balanced influence of different interests), the arena will negotiate on the basis of relevant impact information. Procedures then only will hamper the flexibility of such a process. Others say, that a procedure is needed to ensure that the process is balanced, and that important impacts are not overlooked.

As of June 2002, only the procedure under the Habitat's Directive of the EC is still pending, to decide whether this is a project of overriding public interest.

Contributor: [Sibout Nooteboom](#)

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### ***EU Parliament Calls for SEA on TEN***

The European Parliament called for all transport projects under the trans-European network (TEN) to be subject to SEA<sup>3</sup> as they voted on amendments to the Commission's interim guidelines.

Under the Commission's proposed guidelines, Member States are to carry out "where necessary" environmental impact assessment of transport plans and programmes leading to TENS. MEPs changed this proposal to make this into a compulsory requirement that is also extended to accession countries.

A further amendment extends TENs to accession countries and made funding of their infrastructure projects by international bodies subject to SEA. The Parliament also called for the removal of projects from the list if they are not completed within 15 years.

Contributor: [Paul Tomlinson](#)

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### ***Challenges of Implementing the SEA Directive by the European Regions***

The Government of Catalonia presented at the 5<sup>th</sup> Environmental Conference of the Regions of Europe (ENCORE), in September 2001, a technical report

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[www2.europarl.eu.int/omk/sipade2?PUBREF=://EP//TEXT+REPOR T+A5-2002-0135+0+DOC+SGML+v0//EN](http://www2.europarl.eu.int/omk/sipade2?PUBREF=://EP//TEXT+REPOR T+A5-2002-0135+0+DOC+SGML+v0//EN)

regarding challenges of implementation by the European Regions of the new Directive on Strategic Environmental Assessment (SEA). This report confirms important limitations to date concerning the effectiveness of EIA practice in the European Community and emphasises that the adoption of the new Directive on environmental assessment of plans and programmes marks notable progress towards environmental integration.

The first part of the report discusses three basic aspects concerning the European institutional framework and the flexibility of the Directive:

- The potential of SEA as a tool for integrating sustainability criteria in planning proposals from the start of the decision-making process recognising the conceptual, procedural and methodological issues.
- In this sense, the report comments on the application of SEA and environmental assessment of policies, plans and programmes, which consists of a merely classic EIA applied to a more or less defined proposal of a plan or programme.
- The importance of regulating and standardising the environmental assessment procedures currently in existence at state and regional level given the diversity of frameworks of competencies and procedures in the European Union.
- The double task of the competent authority of promoting and being responsible for the assessment. The report emphasises this aspect with regard to achieving the effective integration of the environment in sectoral policies, but highlights the requirement for a serious commitment on the part of these authorities.

A second part of the report makes a brief presentation of the contents of the Directive and points out the lack of sufficient knowledge and experience of the environmental and sustainability factors to be assessed on a SEA process and the potential environmental impact to be considered.

Furthermore, an analysis of the Directive raises doubts regarding certain aspects. These include:

- Determining the assessment's area of application;
- The environmental authorities' responsibility;
- Control of the results of the assessment;
- Transboundary consultations;
- Public participation and, in general,
- The role of the regions in a European Union built on the state model.

As a result of all these observations, the report for the ENCORE network presents a series of proposals directed at the Regions of Europe. Some of them are:

- To advance towards clearer terminology of SEA and the establishment of a more unified methodological base;

- To create an inter-departmental technical body for the carrying out of environmental assessment;
- To design guidelines for the development of best practices in SEA;
- To create databases on scheduled plans and programmes and those that are underway;
- To establish climatic change and conservation and the sustainable use of the biodiversity as basic criteria for determining whether or not a plan or programme should undergo environmental assessment.

Finally, the report highlights the possible loss of the instrument's strategic nature. It also proposes to establish the assessment of public policies (including legislative proposals) and a triple-level assessment system: the environmental assessment of policies (extendable to legislative proposals), the environmental assessment of plans and programmes and the integrated assessment of the environmental impact of projects.

The published report is available from:

<http://www.encoreweb.org/searegio.doc>

Contributors: [Arnau Queralt](#), [Pere Sala](#), [Pere Torres](#)

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## **GUIDANCE AND TECHNIQUES**

### *Cost 350*

Since the launch in October 2001 of COST 350 – Integrated Assessment of Environmental Impact of Traffic and Transport Infrastructure, progress has been made on defining the exact scope of the initiative.

The main objective of the Cost 350 Action is to establish a operational concept, integrating at regional scale, all the environmental aspects of traffic and land-transport infrastructure in order to assist policy makers in an earlier stage of their decision making on transport and mobility. Subsidiary objectives are:

- To optimise use of existing research results regarding environment and transport;
- To formulate new and enhanced approaches to environmental assessment having relevance to participating countries;
- To achieve a common understanding of the importance and concept of integration of environmental aspects and the transport modes;
- To identify further research requirements.

The project COST350 is being taken forward with the co-operation of thirteen countries (so far) through the following Working Packages:

- WP1: Definition of the scope of the methodological guidance;
- WP2: Transport infrastructure planning situations;

- WP3: Environmental impacts/indicators and assessment methods;
- WP4: Transport planning option parameters and assessment methods;
- WP5: Aggregation of impacts/indicators and integration methods;
- WP6: Synthesis of COST 350 methodology;
- WP7: Tests and illustrations of COST 350 methodology.

The first work package is characterising the methodological guide for the rest of the project and will finish towards the end of 2002.

Much research has been carried out in Europe and elsewhere which is of relevance to the topic under study. Therefore the second work package is to establish an inventory of the transport planning contexts, in terms of the decision-making processes, scenarios considered, impacts assessed, as well as integration and evaluation procedures used.

The results from Work Package 2 provide the foundation to subsequent work packages, with Work Package 3 considering the indicators and the used methods to derive the indicator values. Hence the data and knowledge systems needed to support the indicators are to be explored. Indicators that help define the environmental capacity of transport networks are being sought. It is envisaged that scientific research needs to support the development of indicators will be identified.

Work Package 4 considers the information needed on the transport systems that are to be assessed, focusing upon the data from transport models and scenario development processes.

The process of integrating the environmental impacts in order to aid communication to decision-makers is considered within Work Package 5. This package will explore the potential of life cycle analysis, environmental capacities and the development of integrated modelling systems.

Work Package 6 involves the development of the methodology in such a way that it has wide applicability to different transport planning contexts..

At Working Package 2 meeting held in Madrid in June 2002 it was determined that the product was to be a handbook or methodological guide that focused on the application of SEA to decision-making on transport infrastructure. Decision-makers involved with the planning of transport infrastructure at all relevant levels (national, regional and local) were to be the target group. The guide was to be developed based upon a critical review of country case studies.

During the Work Package 2 meeting held 6<sup>th</sup> September 2002, these concepts were further developed graphically illustrating the different understanding of the term strategic. Some countries considered strategic planning to related to decisions addressing policies, plans or programmes in which there was a strong multi-modal element. Under this view transport measures are only defined at a conceptual level with no decision on the preferred corridor let alone the preferred scheme design, and where the forecast assessment year is at least 5 years and potentially up to 30 years hence. In this view statutory EIA commences is needed to support a yes/no project decision with other statutory or non-statutory assessment activities being employed to identify the preferred project alignment or location.

A counter view was that EIA only deals with the statutory yes/no project decision and that SEA applies to all assessment activities undertaken in advance and need not have a multi-modal focus or necessarily have a long term planning horizon.

There was also an interesting observation that as the SEA Directive applies to plans that are required by legislation, so there may be pressures in some Member States to minimise the number of plans required by legislative instruments.

During discussions on data needs for SEA the need for the transport models to meet these needs was seen to be of paramount importance. Consequently there is a need for transport modelling to consider the data needs of all users not just those of transport planners.

In exploring indicators, the question of how they should be grouped between social/human, natural environment and economic proved to be a topic of considerable debate. Issues related to double counting of impacts and the manner in which land take impacts perhaps can be translated into an economic unit.

Subscribers wishing to contribute to the Work Packages can do this by either submitting papers, references to materials or by becoming actively involved in specific Work Packages. Opportunities also exist to establish supportive local COST350 groups in each country.

To obtain more details on participation in the Work Packages contact: [Martijn Koster](#). While for involvement in a United Kingdom COST350 contact: [Paul Tomlinson](#) or more general information on COST visit: [www.cordis.lu/cost-transport/home.html](http://www.cordis.lu/cost-transport/home.html)

Contributor: [Paul Tomlinson](#)

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### *Aggregating Environmental Indices*

This report published by OECD<sup>4</sup> provides a review of the tension between the desire of policy makers and the public for a reliable and reduced set of environmental indicators with scientific concerns over the limitations of aggregated indices.

The report examines 23 indices and discusses the various aggregation methods proposing a set of quality criteria. While these indices are focused upon national level reporting, the issues raised may be of use in aggregation processes applied to SEAs.

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### *Swedish Guidebook for Environmental Assessment in the Planning of Transport Systems*

A short guidebook on SEA was jointly worked out by transport administrations, environmental agency and other concerned bodies in Sweden. It was published, only in Swedish<sup>5</sup>, in January 2002 and especially aimed to be used during the ongoing long term planning of measures for the Swedish Transport system, which involves national, regional and local levels.

The book refers to the EC Directive, describing a process and analysing activities that are adapted to the transport sector and in conformance with the EC Directive. It is not expected that legal SEA documents and regulatory processes will be fulfilled at present.

A Swedish Government's directive expects that an environmental assessment should be presented together with the assessment of consequences for other areas of the transport policy and especially in terms of the achievement of goals. Apart from a goal on basic transport supply, the transport policy goals and targets address six areas:

- Accessibility;
- Transport quality;
- Traffic safety;
- Environment;
- Regional development;
- Equity.

For each recommended activity there are short examples or issues mentioned from actual assessment situations.

4

<http://www.oelis.oecd.org/olis/2001doc.nsf/809a2d78518a8277c125685d005300b2/01e925275f224300c1256ba700472d20?OpenDocument>

<sup>5</sup> Miljöbedömningsguiden. Vägledning för miljöbedömning vid planering av transportsystem. Naturvårdsverkets förlag, Stockholm 2001.

There are no exact interpretations of the EC Directive in this book, so difficult questions remain to be answered and hence the need for European guidance. One such issue is how significant effects should be defined at this planning level. The guidebook suggests certain indicators to be used within the following four areas:

- Acidification, climate change and change in energy use;
- Health and safety (only effects for the surrounding of accidents);
- The natural environment, cultural heritage, outdoor recreation and landscape;
- Natural resources.

Ideas on how to make useful presentations of the assessment are provided.

The recommended methodology, which is to be integrated in the planning system, was discussed at three regional seminars. One of the most important, but difficult activity to undertake at a regional level (County Administrative Boards) discussed at the seminars, was to what extent it would be possible to involve regional politicians early in the process. The methodology does not exactly fit the traditional planning exercise, but it has the potential to influence practice.

Contributor: [Inga-Maj Eriksson](#)

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### *Transport Planning Resource Guide: A Guide to Preparing the Transportation Element of a Local Comprehensive Plan*

While this report addresses transport planning in the US, many of the elements of this easily accessible guide will be of use to other transport planners as community involvement becomes an increasing element of plan making activities. The guide can be found at:

[www.dot.state.wi.us/dtim/bop/pdf/transportation-guide.pdf](http://www.dot.state.wi.us/dtim/bop/pdf/transportation-guide.pdf)

Contributor: [Paul Tomlinson](#)

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### *UK Treasury Issues Consultation on Revisions to Government Appraisal Practice*

A consultation document issued on "Appraisal and Evaluation in Central Government" (the Green Book) heralds the following main changes in the new draft Green Book:

- There is much greater emphasis on the identification, evaluation and measurement of benefits (and consequently on their management and realisation) – in order to assess more explicitly whether proposals are worth the resources required to be expended.

- The current discount rate is being ‘unbundled’ so that the new rate reflects only one factor (the social time preference rate), set at 3.5%.
- The proposed guidance recognises the tendency of appraisers to be over-optimistic when estimating costs, benefits and time profiles for proposals. Pre-set adjustments, categorised by project type, are proposed that will, by default, increase appraisal options’ estimated capital costs and works’ duration.
- There is new guidance on how to take account of the distributional implications in assessments.

The review of the Green Book is intended to tackle the following deficiencies in the current capital appraisal process:

- The methodology needs to be long-term and to tackle key issues, such as the evaluation of benefits;
- Stronger incentives are needed to encourage users to adopt a systematic and thorough approach to appraisal;
- Strengthened expertise on appraisal techniques is needed within government.

The draft Green Book provides a comprehensive overview of the assessment process, from the justification for government action through to the development and implementation of lead options. Through its eight annexes the practitioner is provided with a thorough understanding of both how and why the recommended techniques and analyses should be performed. The annexes address:

- The assessment cycle and conducting research;
- Government intervention;
- Valuing non-market impacts;
- Land and buildings;
- Risk and uncertainty;
- Distributional impacts;
- Discount rate;
- Procurement choices and project implementation.

[www.hm-treasury.gov.uk/economic\\_data\\_and\\_tools/greenbook/data\\_greenbook\\_index.cfm](http://www.hm-treasury.gov.uk/economic_data_and_tools/greenbook/data_greenbook_index.cfm)

Contributor: [Paul Tomlinson](#)

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### ***Surrey Makes Planning Easier***

Surrey County Council is developing a ground-breaking new service to improve the way major planning issues are dealt with. Its new Environmental Impact Assessment website will be a first-stop-shop which will act as a prompt list and information service to cut red tape delays. Key aims are to promote early and wide consultation, aid decision-making – and to help avoid the sort of glitches or oversights that cause delay and frustration in planning applications.

The site will benefit planners, developers and members of the public by signposting complex planning processes, made more relevant today because EU and UK regulations demand increasingly close scrutiny and control.

It will take developers step-by-step through the processes essential to take their proposals from idea form, to a fully-fledged robust planning application. The website also aims to promote best practice guidelines for local authorities or other organisations like English Nature who may be consultees. But members of the public will also be able to log on to see issues of interest explained first-hand.

The website will cover every process of EIA, from screening, and scoping, to review. Due to start by December, two members of staff are available for enquiries supporting the website. They will also establish and update:

- A glossary of terms;
- Case law;
- Contact details for further advice;
- Links to further information;
- Worked examples of best practice.

Contributor: [Thomas Jones](#)

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### **ENVIRONMENTAL VALUATION**

#### ***Applied Evaluation of Biodiversity***

This OECD paper<sup>6</sup> published by the Environment Policy Committee in February 2002 describes the experience of biodiversity valuation in the Czech Republic. The methodology for estimating environmental values of biotypes, originally developed in the Hesse federal state of Germany, was used and applied on the three levels: local (Tlustec case study), regional (highway D8 project) and national (nation-wide evaluation of biotopes of the Czech Republic). A key objective was to estimate the total natural capital of the Czech Republic by valuing the particular biotopes in terms of land-cover based on early 1990's satellite pictures.

The D8 highway planned to pass through the protected České Středohoří region is expected to lead to an overall reduction in air pollution, but will sever several significant wildlife corridors. An alternative tunnelled solution could threaten underground water supplies

Using the Hesse methodology that combines the ecological functions of the biotopes and the costs of restoration was used. This method is based on

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[www.oalis.oecd.org/olis/2001doc.nsf/809a2d78518a8277c125685d005300b2/cf305d328cf32683c1256b61003ac20b?OpenDocument](http://www.oalis.oecd.org/olis/2001doc.nsf/809a2d78518a8277c125685d005300b2/cf305d328cf32683c1256b61003ac20b?OpenDocument)

environmental asset valuation combined with observed costs of actual restoration and compensation measures.

Point values for the basic biotypes were assigned by a group of experts and then transferred into monetary value by multiplying the points obtained by the average restoration cost necessary for maintaining the quality of biotypes.

The final valuation of 232m CZK was low in comparison with the highway construction costs as two thirds of the highway are planned to be located on agricultural arable lands with low environmental value. Loss of the value of the environmental functions caused by the deterioration of the whole České Středohoří protected landscape area was not, however, considered.

The authors of the paper noted that the Hesse methodology could be transferred to all countries, provided the list of biotopes and their point values were adjusted for local use. The Commission of the EU in the White Paper has acknowledged transferability on Environmental Liability from 9 February 2000 [COM (2000) 66 final], in which the Hesse method is recommended for the EU member countries as a way of evaluating damage to biodiversity in monetary terms.

Contributor: [Paul Tomlinson](#)

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### ***Environmental Benefit/Cost Assessment System***

Alongside increasing environmental regulation has been an increase in the costs of transportation project delivery, however there is a shortage of accurate information about the costs and benefits of environmental mitigation. This may make such mitigation difficult to justify. A report by Washington State Department of Transport (January 2002) focuses upon the costs of environmental mitigation.

The costs of avoiding, minimising, and mitigating environmental impacts for new projects are currently embedded in other project costs. Environmental costs may be under-estimated because of the lack of information and tools to assess them. Such hidden costs emerge later in the project delivery process causing in re-design, change orders, increased construction time, and cost overruns.

In a changing regulatory environment there is a need for dependable cost information in order to help:

- Reduce unexpected spending on environmental issues and increase the accuracy of budgeting to help ensure the smooth delivery of transportation projects.
- Support informed environmental decisions and reduce risks of legal liability.

- Provide environmental decision tools for planning, program management, and project development to identify opportunities to improve environmental and transportation efficiencies.
- Meet environmental needs for transportation project delivery and identify key factors that drive these needs. This will, in turn, help policy makers understand environmental issues related to transportation.

The report describes the following environmental cost and benefit categories used in their environment benefits Costs Appraisal system:

- *Environmental mitigation, minimisation, and Avoidance Costs.* These include the costs of reducing or eliminating environmental impacts for new projects.
- *Environmental Retrofit Projects.* These include the costs of environmental projects that bring existing facilities up to current standards in order to reduce or eliminate environmental impacts.
- *Environmental Compliance and Assessment.* These include costs of analysis and assistance needed for environmental compliance such as permitting, conducting environmental studies and assessments, and developing policies and guidelines.
- *Societal Impacts.* Societal impacts are the direct costs and benefits to the environment that result from transport actions. These include such benefits as preserving wetlands and wildlife habitat, removing fish barriers, reducing emissions, and controlling stormwater runoff.

This report presents a framework for a system to measure and track environmental costs and benefits and commences with a discussion of the importance of measuring and tracking environmental costs. The types of environmental costs and benefits that may be tracked are then examined before decisions and management processes in are described and those that would benefit from having environmental information are identified.

Cost and benefit measurement issues are addressed, including a discussion of the available techniques that are commonly used to quantify environmental costs and benefits. Based on available measurement and tracking techniques, six different candidate systems are presented that combine different measurement and tracking characteristics.

The report can be found at:

[www.wsdot.wa.gov/eesc/environmental/programs/watershed/docs/EBCA\\_Final\\_0528021.pdf](http://www.wsdot.wa.gov/eesc/environmental/programs/watershed/docs/EBCA_Final_0528021.pdf)

Contributor: [Paul Tomlinson](#)

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## HEALTH IMPACT ASSESSMENT

### *Impact of Transport on Health*

European Parliament Committee on Regional Policy, Transport and Tourism published a [report](#) on the impact of transport on health in January 2002 with the objective is to give a higher priority to the relationship between transport and health in EU policy making.

The relationship between transport and health has, until now, focussed primarily on measures to reduce accidents, while other health effects have enjoyed less attention.

While emissions from individual vehicles are declining, these benefits being offset by the greater number of vehicles, together with increases in the length and the number of trips made. As a result a recent study that found out that air pollution now causes a higher mortality rate than road accidents<sup>7</sup>. In addition, air quality inside vehicles is also a source of concern as evidence suggests that in slow moving traffic, pollution levels are higher inside the car than out<sup>8</sup>.

Although there have been a number of recent EU initiatives on transport and on health, there is still no *integrated* approach which builds health considerations into transport policy on a systematic basis. Hence the report calls on the Commission to implement the EC Treaty provision requiring a high level of human health protection both in the definition and implementation of all Community policies and activities. This is to be delivered by integrating health considerations into its transport policy proposals and projects that have a recognisable and substantial impact on health.

Such HIAs could be developed separately or be integrated with Strategic Environmental Assessments. The aim would be to show clearly how and why health considerations were taken into account and the expected health impact. For example, one of the main priorities of future EU transport policy is internalising the external costs of transport. By incorporating HIA into the decision-making process some of the external health costs of transport and of the external health benefits of specific transport policies can be included. It may also give an indication of the effects of proposed measures on vulnerable groups, like children, the elderly, disabled and people working in the transport sector.

The report calls on the Commission to apply the above principle to major EU transport projects and policies, as

<sup>7</sup> *Public Health impact of outdoor and traffic-related air pollution: a European Assessment*, Kunzli, N et.al. The Lancet, 356:795-801 (2000)

<sup>8</sup> *Road user exposure to air pollution: a literature review*, Environment Transport Agency/IEEP, for Department of Environment, Transport and the Regions, London, November 1997

long as this can be done without substantially delay. In addition, it encourages the Commission to report on its experience of applying HIA to the field of transport by the end of 2003. This review should assess the extent to which health policy considerations can be taken into consideration in the various policy-making stages as well as to provide an opportunity for an assessment and refinement of appropriate methodologies.

The report also recommends that the Commission extends its research into how best to develop and adapt appropriate assessment methodologies for the more difficult to assess effects of transport policy on health.

Among other recommendations, the report calls on the Commission to produce proposals, by the end of 2003, on ways to stimulate the exchange between Member States of 'best practice' and the dissemination of research results in the field of cycling and walking.

Contributor: [Paul Tomlinson](#)

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### *An Air Quality and Health Impact Assessment of Urban Road User Charging*

The impact of road pricing and other strategic road transport policy options, on urban air quality and health was assessed in a DETR-EPSC study, addressing the city of Leeds, UK. Conducted collaboratively by the university and city council, the study investigated 16 scenarios under the headings:

- "Business as usual" trip growth to 2015 (based on TEMPRO forecasts);
- Network development (7 km of new dual carriageway);
- Road pricing with cordon charging (£3; single and double cordons);
- Road pricing with distance charging (2-20 p/km);
- The wider adoption of clean fuel vehicle technology, including LPG, electric and hybrid vehicles.

The study used the Transport and Emission Modelling and Mapping Suite (TEMMS), software developed by the team to facilitate more rapid appraisal of traffic movement on urban air quality. Using a GIS and VB programs, TEMMS integrates dynamic simulation models of traffic flow (SATURN), pollutant emission (ROADFAC) and dispersion (ADMS-Urban). Road pricing is modelled using SATURN's SATTAX program, and UK fleet composition and emission factor data were drawn from the EU MEET project.

Each scenario was assessed against: (a) exceedence of air quality standards for eight air pollutants; (b) respiratory disease burden (NO<sub>2</sub>, PM<sub>10</sub>), (c) spatial redistribution of pollution, an environmental justice concern, and (d) CO<sub>2</sub> emission. Respiratory disease

burden was assessed using Department of Health COMEAP dose-response functions, and residential population data for 200m grid cells.

The results show that under business as usual, projected trip growth results in longer, slower and more polluting journeys. Fleet turnover and emission control technology will lower concentrations of NO<sub>2</sub> and CO, but those of other pollutants, including particulates and CO<sub>2</sub> will continue to rise. Building new roads will not alleviate the problem as the additional capacity induces more and longer trips, giving a net increase in emissions.

All road user charge options improve air quality as total trips are suppressed. However, drivers re-route to avoid charge zones, so journeys become longer and more polluting, whilst pollution is redistributed to areas that previously experienced better air quality. The exception is a distance charge of 2 - 10 p/km, where trips are faster, shorter and with little pollution redistribution.

The study also demonstrated that the poor in Leeds are exposed to the worst transport related air quality, but that any measure that improves air quality city-wide will reduce this social inequality. Clean fuel vehicles may be beneficial in this respect, but emission factors are currently inadequate to allow a proper assessment. Finally, health impact assessment shows that air quality management action plans should address disease burden 'hot spots' and not just air quality standard exceedance areas.

For further information see the [technical report](#) or the following two papers:

Mitchell, G; Namdeo, A; Lockyer, J. and May, A.D. (2002). The impact of road pricing and other strategic road transport initiatives on urban air quality. *Eighth Int. Conf. on Urban Transport and the Environment in the 21<sup>st</sup> Century*, 13-15 March, Seville, Spain

Namdeo, A., Mitchell, G. and Dixon, R. (2002). TEMMS: An integrated package for modelling and mapping urban traffic emissions, air quality and respiratory disease. *J. of Environmental Modelling and Software*, 17 (2),179-190.

Contributor: [Gordon Mitchell](#)

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### ***Air Pollution and Health Information Pack***

An Air Pollution and Health pack giving information on both indoor and outdoor air quality issues is available from the Department of Health. It includes a series of factsheets giving details of contact organisations, helplines, websites, official reports and other materials.

To obtain of a free copy, write to:

Contributor: [Emma Jenkins](#)

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### ***Health Impact Assessment – Ready for Use?***

The SEA Directive calls for the health effects of plans and programmes to be assessed along with a series of other indicative topics. However, we must begin to ask the following searching questions of Health Impact Assessment methods:

- Are the methods sufficiently advanced to extend beyond the baseline reporting of the health condition of a community in order to address future do-minimum and do-something forecasts?
- How should issues of double counting be handled?
- Are the uncertainties in HIA too great to be meaningful to the decision-making processes?
- What screening and scoping mechanisms are required?
- How to report the health outcomes of different plan and programme options?
- How to involve the public?
- What training is required to ensure that HIA is correctly applied?
- How should awareness of the existing databases be improved and the data gaps addressed?

Dr Mike Joffe and Dr Jennifer Mindell in their paper in the *Journal of Epidemiology*<sup>9</sup> identify the following distinct types of work on health and its determinants in relation to policy as each has a role in linking policy with health outcome:

- *Policy analysis* of a policy domain that affects health e.g. EU tobacco subsidies;
- *Needs assessment* of the prevailing health problem;
- *Burden of disease* to estimate the number of cases attributable to a risk;
- *Social context* since socio-economic and cultural factors influence people's exposure to risk factors;
- *Advocacy* such that the health problem is structured in a way to influence policy development;
- *Health effects of attaining the policy targets*;
- *Health effects of an action either prospectively or retrospectively*;
- *Health effects of an action with mitigation*;
- *Comparison of health effects of different policy options*.

The authors conclude that the strong policy drive for HIA at both a national and local level may have unintended consequences that are counterproductive if

<sup>9</sup> Joffe, M. and Mindell, J., 2002: A Framework for the Evidence Base to Support Health Impact Assessment, *Journal of Epidemiology & Community Health*, Vol. 56 (2) p 132-138.

HIA becomes perceived as ineffective and therefore wasteful of resources.

The need for a robust evidence base is key to HIA as there is a lack of evidence on links between policy options and health determinants, for example the health effects of large scale traffic reductions are not well understood.

<http://www.europaworld.org/issue15/theeuropeaninvestmentbank291200.htm>

Joffe and Mindell observe that there is a need for a body of evidence on the links between policy and health outcomes and that many types of work such as local authority projects are either not widely known or not readily accessible. Hence a gap analysis to review existing data and the anticipated data needs is required. While these views are taken from an HIA perspective they equally apply to SEA.

Contributor: [Paul Tomlinson](#)

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## **TRANSPORT PLANNING AND THE ENVIRONMENT**

### ***Sustainable Freight Transport***

During debate at the 2000 Council, Ministers stated that a move of freight from road to rail was a key part of their strategies to achieve more sustainable transport systems. As a result many Governments have established targets for rail traffic, for example:

- French policy seeks a doubling of rail and waterborne freight over the period 1998 to 2010;
- The UK seeks an increase in the modal share of rail in freight transport from 7% to 10% between 2000 and 2010 – representing an 80% increase in rail freight traffic;
- European Commission through the 2001 transport white paper<sup>10</sup> seeks to return to the 1998 modal split by 2010.

The means to achieve such a change in freight transport varies across Europe, with coastal shipping and inland waterways offering some opportunity. However as the recent ECMT paper on “Developing a Sustainable Balance between Substitutable Modes of Freight Transport”<sup>11</sup> reveals there is no universal hierarchy as to which mode has the lowest environmental impact. Load factors, operating efficiency, engine technology, fuel quality, maintenance etc are important in determining the relative performance of each mode.

<sup>10</sup> European Transport Policy for 2010: Time to Decide, COM(2001)370.

<sup>11</sup> [www1.oecd.org/cem/topics/council/cmpdf/CM0201e.pdf](http://www1.oecd.org/cem/topics/council/cmpdf/CM0201e.pdf)

In exploring indicators for assessing progress towards sustainable transport systems, the ECMT paper notes that the following indicators may be of value:

- Pollutant emissions or other transport volume related impact;
- Volume of truck movement through sensitive locations;
- Progress towards efficient taxes and charges.

At an aggregate level the most relevant indicators would estimate the environmental impacts in relation to the carrying capacity of the environment both locally and globally. The ECMT paper, however, proposes the ratio of environmental impacts in monetary terms to the social and economic value of specific transport services could be used as a substitute. Ratios of transport volume to GDP are sometimes employed to discuss "de-coupling" of transport and economic growth, but it should be noted that they make no distinction between the benefits that transport provides and the environmental costs it engenders.

Some Governments view the current modal split as so far removed from the optimum that they employ tonne-km transported by mode as an indicator. The ECMT paper observes that such an indicator is not, on its own, a good indicator of progress towards sustainable development, not least because it could be used to encourage rail traffic regardless of financial sustainability, economic return on investment or environmental impact. Moreover, rail, inland and short sea shipping cannot substitute for road in many markets. Two thirds of tonnes transported by road in the European Union travel less than 50 km.

The ECMT paper calls for care to be taken not to confuse modal split with market share. Modal split is an extremely aggregate concept whilst market share is only meaningful at a highly disaggregate level where there is potential competition between transport services for the same business.

Opportunities to deliver the largest benefits from a modal shift are likely to differ between countries, nevertheless, the biggest benefits overall are to be expected in three main situations:

- Crossing mountain barriers;
- Developing dedicated trunk freight corridors, where circumstances make this possible and economic assessments show positive socio-economic returns, along routes where congestion on the roads is a problem or is likely to become serious and where there is a potential to create significant increases in rail capacity;
- Improving the structure or loading gauge of infrastructure serving certain ports.

Decisions on making investments aimed at changing modal split must be supported by assessments of the socio-economic return expected.

A review of the experience of countries that have developed explicit plans for influencing modal split<sup>12</sup> indicates that a comprehensive package of measures is required in order to create the conditions in which modal shift can be achieved. Unless carefully co-ordinated, changes in the regulatory and fiscal environment for one of the modes can seriously undermine achievement of plans to influence modal shift. Moreover, there is potential for induced traffic to influence the outcome of measures to promote modal shift, particularly where the emphasis is on improving rail services without addressing the other elements of the package. At the same time efficient, quality alternatives are essential to achieving any significant modal transfer.

The environmental performance of non-road modes must also improve particularly in terms of air emissions from shipping and diesel locomotives, noise from freight trains and the impacts of port activities.

The ECMT paper outlines 13 principal elements to be addressed by measures seeking to promote a modal shift in freight transport.

Contributor: [Paul Tomlinson](#)

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### ***Guidelines for the Selection of Snow and Ice Control Materials to Mitigate Environmental Impacts***

Considerable quantities of snow and ice control products are applied to highways, and environmental and regulatory agencies have questioned the environmental impact of these products. Transportation agencies are asked to use "environmentally friendly" or less toxic alternatives wherever possible, but there is no commonly accepted guidance for determining which products meet these criteria.

Environment Canada has concluded that inorganic chloride road salts are harmful to the environment under the Canadian Environmental Protection Act, thus requiring development and implementation of improved management practices. Also several new chemical preparations are available but there is limited information about their environmental impacts.

The objective of a National Co-operative Highway Research Program research project is to develop guidelines for selection of snow and ice control chemicals and abrasives, based on their constituents, performance, environmental impacts, cost, and site-specific conditions. Further details can be found at

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<sup>12</sup> CEMT/CS(2002)10/REV1

[www4.trb.org/trb/crp.nsf/c9d0a412717cf3a68525672f00632fb5/02cd6676cc88f2ec85256b990044a3a5?OpenDocument](http://www4.trb.org/trb/crp.nsf/c9d0a412717cf3a68525672f00632fb5/02cd6676cc88f2ec85256b990044a3a5?OpenDocument)

Contributor: [Paul Tomlinson](#)

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### ***Environmental Streamlining and Stewardship***

This forthcoming research for the American Association of State Highway and Transportation Officials Standing Committee on the Environment seeks to develop improvements to the analytical methods, decision-support tools, procedures, and techniques employed by practitioners in environmental streamlining, environmental stewardship, state-wide and urban environmental transportation planning, program delivery, and project development.

As this project may well lead the development of new techniques on environmental assessment its progress can be followed at:

<http://www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+25-25>

Contributor: [Paul Tomlinson](#)

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### ***Low-Impact Development Design and Construction Manual for Transportation Systems***

Transportation agencies are faced with the challenge of meeting the demand for efficient transportation systems while reducing the environmental impacts of transportation projects. Highway runoff can have adverse impacts on local hydrology and water quality as well as on ecosystems, surface water and groundwater supplies and fisheries.

In the US the ability and long-term economic sustainability of current stormwater management practices have been questioned. Even where the highway contributions to the total area of impervious surface in a watershed may be small, hydrodynamic change and pollutant loads generated can significantly impact sensitive aquatic species on an individual project basis and on a cumulative basis throughout a transportation corridor.

Low-Impact Development (LID) has been identified in the US as a promising innovative technological approach to stormwater management and resource protection. LID technologies are based on using the cumulative affects of multiple, redundant, decentralised stormwater management techniques to meet quantified stormwater management thresholds.

Further details on this ASHTO research project can be found at:

[www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+25-26](http://www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+25-26)

Contributor: [Paul Tomlinson](#)

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### ***Designs and Guidelines for Safe and Aesthetic Urban Roadside Treatments***

Increasingly, communities in the US have requested the re-design of the highways using "Context Sensitive Design" principles that enhance the appearance and, in some cases, the function of the highway in terms of the effect on motorist and pedestrian/ bicycle safety.

The objective of this research is to evaluate the impacts of aesthetic urban roadside designs and to develop design guidelines that will lead to a toolbox of effective designs that enhance aesthetics and pedestrian/ bicyclist safety but do not compromise the safety of the motorist. Further details can be found at:

[www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+16-04](http://www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+16-04)

Contributor: [Paul Tomlinson](#)

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### **TRAINING IN SEA & EIA FOR TRANSPORT**

#### ***Central Eastern University SEA and Transport Planning Training Course***

Department of Environmental Sciences and Policy of Central Eastern University with participation of the Regional Environmental Centre (REC) held a distant learning and Summer University course on environment and regional transport planning in July. This course had a special focus on activities recommended by TINA for the accession countries of Eastern Europe and was planned in close co-operation with the Sofia Initiative on EIA.

The Summer University attracted 26 delegates from 14 countries mainly from Central and Eastern Europe but also delegates from Estonia and South Africa.

The course was directed by Aleg Cherp of Department of Environmental Sciences and Policy, Central European University and supported by the following lecturers:

- Ed Bellinger, Department of Environmental Sciences and Policy, Central European University, School of Biological Sciences, University of Manchester, UK.
- Jiri Dusik, Regional Environmental Centre for Central and Eastern Europe, manager of the Sofia Initiative for Environmental Impact Assessment.
- Andreas Kaefer, Trafico, Austria.

- Norman Lee, Department of Economics, School of Planning and Landscape, Institute for Development Policy and Management, the EIA Centre, University of Manchester, UK.
- Ruben Mnatsakanian, Department of Environmental Sciences and Policy, Central European University.
- Urszula Rzeszot, Polish Environmental Institute.
- Paul Tomlinson, TRL Ltd, UK.

During a two-week course preceded by a 6-week distance learning module, the participants engaged in a systematic rigorous study of the SEA procedures and methods as they apply to transport plans and policies.

This two-week course examined the transport planning processes and the means by which environmental consideration can be integrated into such processes. The value of an objectives-led approach to transport planning was stressed. Following a review of the SEA Directive, lectures and simulation exercises explored the differences in approach between SEA and EIA before addressing the role of SEA in decision making and plan level mitigation and enhancement opportunities.

The utility of GIS to support SEA in transport planning was explored before the role of monitoring and follow-up was discussed. Public involvement and capacity building measures needed to support SEA and transport planning were examined during the second week of the course. More information including course materials is available at <http://www.ceu.hu/envsci/sun/summer.htm> or <http://www.ceu.hu/envsci/eianetwork/>

Contributor: [Aleg Cherp](#)

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### **PUBLICATIONS**

#### ***OECD Publications***

- **Road Travel Demand: Meeting the Challenge:** This report provides case studies and examples that demonstrate successful approaches to strategies, programmes and services have recently been implemented to reduce travel demand and improve traffic conditions around the globe.
- **Benchmarking Intermodal Freight Transport:** This report analyses illustrative benchmarking exercises to provide insights into how they are implemented.
- **Handbook of Biodiversity Valuation: A Guide for Policy Makers:** This Handbook describes the types of values usually associated with biodiversity. While recognising the limitations of the economic approach, it considers how economic and non-economic values can be reconciled.
- **Impact of Transport Infrastructure Investment on Regional Development:** This report provides insights into these key issues by analysing

illustrative studies of the impacts of transport infrastructure investment.

- **Household Tourism Travel: Trends, Environmental Impact, and Policy Responses<sup>13</sup>**: While the on-site impacts of tourism activity on local water and air quality, biodiversity and land-use are generally well understood there has been little focus given to the environmental impacts of current and projected trends in household *tourism* travel. This case study is intended to help fill this gap by identifying important trends in household tourism travel, related environmental impacts, and options for reducing those impacts.
- **Trends in the Transport Sector: 1970-2000**: This publication presents the most up-to-date statistics on transport markets in Europe, together with charts highlighting the major trends.
- **Bus Systems for the Future: Achieving Sustainable Transport Worldwide**: This book shows how bus rapid transit differs from traditional bus systems and how it can be developed around the world. The book also provides a review of clean fuels and advanced technologies such as "clean diesel", CNG, hybrid-electric and fuel cells. Case studies are made of six cities and of the steps each might take to encourage more sustainable transport systems
- **Tolls on Interurban Road Infrastructure: An Economic Evaluation: Round Table 118**: The Round Table provides a broad view of both the theoretical aspects of tolling and the practical problems posed by its introduction. It takes a scientific look at what is a burning issue, at a time when a number of countries are envisaging the widespread adoption of electronic tolls.
- **Transport Policies in Armenia, Azerbaijan, Georgia**: The papers (mainly in Russian) from the ECMT/World Bank joint seminar held in Tbilisi on 18-19 April 2002 are available on the ECMT website<sup>14</sup>. This seminar provided an exchange views on transport priorities and their implementation in the three south-Caucasus countries. Delegates reviewed successes and failures over the last decade and defined new challenges and possibilities for co-operation particularly in policy formulation from more advanced countries, from ECMT, World Bank and other international organisations. The seminar also considered the principles for links between national goals, regional interests, and requirements of Pan-European transport policy.
- **Policy Instruments for Achieving Environmentally Sustainable Transport**: Moving people

<sup>13</sup>

<http://www.oalis.oecd.org/oalis/2001doc.nsf/809a2d78518a8277c125685d005300b2/1df9e50b1b092650c1256b9f0034b213?OpenDocument>

<sup>14</sup> [www1.oecd.org/cem/online/Tbilisi02/index.htm](http://www1.oecd.org/cem/online/Tbilisi02/index.htm)

and freight in an environmentally sustainable manner is a challenge on which insufficient progress has been made thus far. A new target-oriented approach proposed that the environment and health are placed at the top of the policy agenda for transport and related sectors, at international, national and local levels.

- **Transport Infrastructure Regional Study (TIRS) in the Balkans**: This report<sup>15</sup> provides a review of the state of transport infrastructure in the Balkans and provides a programme of investments.

These reports are available from the [Online Bookshop](#).

Contributor: [Paul Tomlinson](#)

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### *European Conference of Ministers of Transport Newsletter*

The ECMT May 2002 Newsletter dealing with seminars and publications is available at: [www.oecd.org/cem/events/newslet.htm](http://www.oecd.org/cem/events/newslet.htm)

Among the publications is a report on "Implementing Sustainable Urban Transport Policies: Key Messages for Government" based on the ECMT project of the same name conducted jointly with the OECD from 1998-2001. ECMT Ministers of Transport approved the recommendations at their Council in Lisbon, Portugal in May 2001.

While progress is being made, trends revealed in the project show that serious difficulties persist in putting these policy plans to work and in seeing the impact of policy actions reflected in urban travel data. The report sets out a number of proposals for how National Governments can improve opportunities for successful implementation of sustainable urban transport policies.

Contributor: [Paul Tomlinson](#)

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### *Victoria Transport Policy Institute*

The prolific Victoria Transport Policy Institute (VTPI) continues its expansion of the "Online TDM Encyclopaedia". This is a unique and comprehensive Internet resource to help transportation professionals identify and evaluate innovative solutions to transportation problems. The Encyclopaedia has more than 90 chapters with hundreds of pages of text and thousands of Internet links, to information on Transportation Demand Management (TDM) planning, evaluation and implementation. It is available free at <http://www.vtpi.org/tdm>.

<sup>15</sup> [www1.oecd.org/cem/topics/council/cmpdf/CM0220e.pdf](http://www1.oecd.org/cem/topics/council/cmpdf/CM0220e.pdf)

Among the new chapters are:

- Energy Conservation and Emission Reductions Strategies;
- Liveability Strategies;
- Context Sensitive Design;
- Land Use Evaluation;
- Transportation Affordability;
- Rural Transport Management;
- Health and Fitness;
- Clustered Land Use;
- Congestion Reduction Strategies;
- Smart Growth Policy Reforms;
- Accessibility.

An Online edition of "Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications," has also been posted by VTPI<sup>16</sup>. This 300-page document provides a review of an extensive number of studies, including categories of costs and benefits that are often overlooked. The Guidebook provides costs values in a format designed to easily calculate and compare the full costs and benefits of transport policy and planning alternatives as well as reference information, mostly available through the Internet.

Individual chapters contain detailed information on various categories of transportation costs and benefits. Using the best available data, it provides monetised estimates of twenty costs for eleven travel modes under three travel conditions. Costs are categorised according to various attributes: whether they are internal or external, fixed or variable, market or non-market.

The Guidebook reviews previous transportation impact studies, discusses economic evaluation practices, describes how non-market impacts are estimated, discusses major findings, evaluates criticisms of transportation costing, and explores implications and applications of this research.

The VTPI has also published a paper on evaluating economic value "What's it Worth? Life Cycle and Benefit/Cost Analysis for Evaluating Economic Value," Presented at Internet Symposium on Benefit-Cost Analysis, Transportation Association of Canada ([www.tac-atc.ca](http://www.tac-atc.ca)), 2001. Available at VTPI: (<http://www.vtpi.org>).

Contributor: [Todd Litman](#)

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### ***Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects***

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<sup>16</sup> <http://www.vtpi.org/tca>

NCHRP Report 466, published this year, provides guidance and a framework for practitioners in defining "indirect effects" of proposed transportation projects. It also provides tools for estimating these effects, and analysing these effects.

The report provides a review of US regulation, case law, and published literature, as well as an examination of EISs and the view of practitioners as it develops a typology of "indirect effects." It then provides a framework for identifying and analysing indirect effects of proposed transportation projects as well as techniques for discerning which of the indirect effects of a proposed transportation project warrant detailed analysis. Finally a course curriculum for teaching effective methods of applying these techniques is provided.

The report is available at:

[http://gulliver.trb.org/publications/nchrp/nchrp\\_rpt\\_466.pdf](http://gulliver.trb.org/publications/nchrp/nchrp_rpt_466.pdf)

Contributor: [Paul Tomlinson](#)

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### ***Guidance for Selecting Compensatory Wetland Mitigation Options***

Land banking is one means of compensatory mitigation of unavoidable losses of wetlands as required by regulations established pursuant to Section 404 of the Clean Water Act in the United States. Land banking can help agencies meet the national goal of "no overall net loss" of wetland functional capacity.

As yet there is no agreed basis for selecting between small-scale, dispersed mitigation versus consolidated mitigation approaches. This issue is likely to emerge with the mitigation actions associated with the application of SEA to transport and land use plans.

Some important potential benefits associated with consolidated mitigation (including wetland banks) are lower costs, higher wetland functional capacity per acre, improved sustainability, and easier management. Potential disbenefits include habitat alteration, landscape fragmentation, loss of functions, and watershed impacts.

The objective of this research is to develop guidance for evaluating and selecting specific compensatory wetland mitigation options associated with development of transportation projects. Further details can be found at: <http://www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+25-16>

Contributor: [Paul Tomlinson](#)

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### ***Environmental Information Management and Decision Support System for Transportation***

Environmental decisions on transportation planning, project development, construction, operations, and maintenance are among the most difficult decisions facing transportation decision-makers. Factors contributing to this situation include:

- The complexity of technical issues;
- The myriad of laws and regulations;
- Cost and time required for environmental reviews;
- Large number of interested parties with different viewpoints and priorities;
- The diversity of impacts, and
- Scarcity and lack of precision of environmental and other critical data.

This US research project seeks to develop a system for environmental information management and decision support for transportation plans, programs, projects, operations, and maintenance activities. Further details can be found at:

<http://www4.trb.org/trb/crp.nsf/All+Projects/NCHRP+25-23>

Contributor: [Paul Tomlinson](#)

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### ***Economic Valuation with Stated Preference Techniques: A Summary Guide***

The UK Department for Transport, Local Government and the Regions published a report on Economic Valuation with Stated Preference Techniques: A summary guide in March 2002. This guide provides a summary of the key steps involved in conducting stated preference studies and is aimed at those who commission, manage and evaluate such studies. The guide is presented in four parts:

- Part 1 - the nature and significance of economic values;
- Part 2 - the estimation techniques;
- Part 3 – choice of survey method, the population and the sample, and how to handle piloting/testing and revision of the questionnaire; and
- Part 4 - data analysis, testing the validity of the results, aggregating and reporting the results.

The summary guide is available as a series of pdf files from [www.dtlr.gov.uk/about/economics/index.htm](http://www.dtlr.gov.uk/about/economics/index.htm)

Contributor: [Paul Tomlinson](#)

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### ***Vehicle Operation and Road Traffic Noise***

This TRL paper by Abbott, Phillips and Nelson in the TRL Journal of Research 5(1) examines measures designed to reduce the impact of road traffic noise at

source. It presents the results of studies showing how road surface and road tyre design can affect the relationship between noise generation and speed in order to indicate where design improvements will provide benefits.

The paper reviews the research examining the effects of traffic management and calming on noise generation, including trials to assess the effect that road hums might have in generating ground-borne vibration when traversed by commercial vehicles. Finally, the paper also examines the scope to affect driver behaviour as a means to reduce noise.

Contributor: [Paul Tomlinson](#)

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### ***Health, Urban Traffic and SCOOT***

This paper by Wood and Cloke in Volume 5(1) of the TRL Journal of Research considers the role of the traffic management system SCOOT in reducing air pollution.

Air pollution damages people's health and road traffic is a significant contributor to pollution. UK Local Authorities have a duty to manage air quality within their areas and may need to develop action plans to improve the environment in Air Quality Management Areas.

When developing plans, they need to consider whether local traffic management can be used to improve air quality. SCOOT control of traffic signals in an urban area can assist in the quest to reduce pollution from vehicles. The potential of SCOOT to help manage emissions has been demonstrated by relocating queues and emissions away from sensitive locations in Birmingham.

Contributor: [Paul Tomlinson](#)

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### ***Transport Elasticities Database***

The Australian Bureau of Transport Economics has produced a comprehensive "Transport Elasticities Database Online". See:

<http://dynamic.dotrs.gov.au/bte/tedb/index.cfm>

Contributor: [Paul Tomlinson](#)

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### ***Transport and Sustainable Rural Livelihood in Zambia: A Case Study***

This paper by Davis in TRL Journal Volume 5(1) considers a recent participatory cross-sectional study of

rural communities in the northern and Copper-belt Provinces of Zambia in March 2000. Through some livelihood analysis the transport constraints and their impact on rural livelihoods and service provision were found to be a high priority for the rural poor. Transport emerged as a serious concern particularly with regard to the impact of poor accessibility and mobility on food security, agricultural marketing and ability to pay for health and education. This case study reviews these interactions and how transport based strategies can improve livelihood outcomes.

Contributor: [Paul Tomlinson](#)

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## **ORGANISATIONS AND FORA**

### ***IAIA***

Three new listservers have been added to the six current IAIA listservs that are available through the IAIA web site. These are Environmental Law; Ethics; and Student & Early Professional listservs. Contact: [www.iaia.org](http://www.iaia.org), Networking > Listserv Discussion Groups.

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### ***Association of Italian Cities for Sustainable Mobility and the Development of Transportation***

The Association of Italian Cities for Sustainable Mobility and the Development of Transportation comprises 14 cities and has a focus on improving air quality in metropolitan areas, reducing traffic congestion and private car use, promoting inter-modality, accessibility, alternative sustainable transport modes and develop mobility management in Italy.

With this background the Association became the national focal point in Italy for European Platform for Mobility Management (Epomm) and jointly with European Metropolitan Transport Authorities (EMTA), launched BESTUFFS (a project to create an effective co-ordination between those involved in freight and goods delivering in cities). The Association now supports several initiatives to promoting sustainable mobility culture and principles.

The Association promoted, with the help Environment Ministry, a voluntary campaign called 'Vado Pulito' focusing on a two wheeler emissions control campaign in eight towns. Based on the results of this campaign a working group was set up by the Transportation Ministry to define technical basis and emission limits for new vehicles.

The draft procedure is based on CO<sub>2</sub> emissions evaluation at 40 km/h and allows a more precise evaluation the contribution to atmospheric pollution of

two wheeled vehicles. Data from the "Vado Pulito" campaign was published by Arpat and Enea (contact: <mailto:d.grechi@arpat.toscana.it> - [santino@enea.casaccia.it](mailto:santino@enea.casaccia.it)).

The Association also has contributed to setting up of ICS – Car Sharing Initiative - and remains a supporter. This national project, financed by Environment Ministry, is to develop a car sharing service co-ordinated between 14 Italian towns.

Association also contributed to organisation and is now giving support to a national project related to incentive for car conversion to use of PLG and methane, as well as supporting the creation of a methane distribution network.

The Association, jointly with Milan council and with the support of Environment and Territory Protection Ministry, organised international workshop on mobility management experiences in different sectors industries in Milan during December 2002. The workshop examined projects on individual firm's employees' mobility needs and results of completed projects. Details from three Italian towns (Milan, for limited traffic zone and pricing, Turin, on the implementation of mobility management services, and Parma, for mobility management in companies) were also presented. A comparison of experiences by Italian and other European firms was also presented also examining different national legislation. Further information can be found at:

[www.cittamobile.it/mobility\\_manager/14dicembre.asp](http://www.cittamobile.it/mobility_manager/14dicembre.asp)

In 1998, the Italian Environment Ministry decreed that firms and public authorities with more than 300 employees, or units with more than 800 freelance workers, should adopt commuter plans for their employees and appoint a mobility co-ordinator, called the mobility manager (Decree of Environment Ministry on "Sustainable Mobility in Urban Areas").

Mobility managers have to develop a mobility plan of home-workplace routing for employees. The plan aims at reducing traffic and pollution due to systematic trips work-home. Approximately 1200 companies have identified a need for a Mobility Manager, but only 367 of them have been appointed and developed their mobility plan.

In December 2000, another decree of the Minister of Environment decided to enlarge the support it is giving to mobility management initiatives, also by financial support to mobility managers and their activities: it has been set aside a fund of around 15.000.000 euros.

Most initiatives have come from city of Rome (10 commuters plan with 16.500 employees), Parma (4 plans and 10.000 employees), Mantova, Genova (6 plans, involving 14.000 employees) Torino (24 plans and 10.000 employees), the county of Milan (7 plans and

12.000 commuters), city of Milan (more of 100 plans and 15.000 employees).

The Association of Italian Cities collaborates with Italian Environment Ministry to promote and spread mobility management principles and projects.

Further details can be found on site [www.cittamobile.it](http://www.cittamobile.it)

Contributor: [Alberto Santel](#)

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## **FUTURE EVENTS**

### ***Conference on Good Practice in Integration of Environment into Transport Policy***

This conference on 10-11 October 2002 in Brussels, will address the integration of environmental considerations into transport policy by means of a large number of good practice cases selected by European experts in the field of environment and transport.

The main feature of the conference will be 9 workshops where participants will discuss practical approaches to promote integration in the policy making process. The topics covered are

- *Land-use planning*: Its use as an instrument to promote environmentally sustainable transport;
- *Intermodality*: Overcoming modal thinking and breaking down barriers;
- *Pricing of infrastructure*: Taking environment into account;
- *Infrastructure investment decisions*: Improving transparency and public participation;
- *Sensitive areas*: Ways of reconciling demand for transport with the environment;
- *Strategic planning, SEA and targets*: Tools to improve integration in transport and other sector policies;
- *Evaluation, benchmarking and indicators*: Using them on the policy-making level;
- *Rethinking organisations and their interplay*: Innovative institutional set-ups and ways to co-operate;
- *Behavioural change and public acceptance*: Achieving consensus on transport policy instruments.

The conference is aimed at policy-makers (primarily government officials from transport and environment ministries or similar authorities) working with transport policy development at national or regional level. While participation at the conference is free the number of participants is limited to 200.

A detailed programme is on the conference website: <http://europa.eu.int/comm/environment/gpc/>

Contributor: [Niels Ladefoged](#)

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### ***Environment & Transport 1<sup>st</sup> International Scientific Symposium – Avignon 19-20 June 2003***

This first symposium is aimed at contributing to the development of a systematic approach to environmental and transportation issues by addressing the following issues:

- *The evolution of the transport system*: Focusing upon the various sources of nuisance using an integrated approach; mobility; vehicle fleets; traffic conditions; infrastructures, “emissions”, covering the various modes with a specific attention to their historical development and their long term dynamics;
- *Perception of the environment*: by the population, experts and decision-makers, analysing the determining factors through historical records, opinion surveys, media, associations, and the manner in which the environment is addressed in transport policies;
- *Transport-related impacts*: on populations and ecosystems considering their social, historical or geographic features, air pollution, greenhouse effects, noise, water pollution, space and landscape, waste, fauna and flora etc;
- *The environment in the concept of sustainable development*: The richness or the vacuity of this concept, its contribution to societal debate;
- *Evaluation methods for environmental sustainability*: environmental indicators, decision making tools;
- *Environmental issues in scenarios of transportation policies*: integrating organisation and technological choices, environmental legislation, mobility policy for people and goods, environmental sustainability in conventional scenarios, the search for suitable scenarios.

Prospective authors should send their abstracts no later than 31 December 2002. This abstract should not exceed two pages and address the following:

- Statement of objectives;
- Method of approach; and
- Results and conclusions

The Scientific Committee will assess the abstracts after acceptance papers are to be submitted by 1 May 2003. Further details can be found at: [www.inrets.fr/services/servies.e.html](http://www.inrets.fr/services/servies.e.html)

Contributor: [Paul Tomlinson](#)

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## **IAIA – Marrakech June 2003**

Next year's IAIA annual conference, Impact Assessment and Capacity Building will be held in Marrakech, Morocco, 14-20 June 2003.

At a time when many countries have already adopted environmental assessment (EA) procedures, and others are on the verge of so doing, what are the lessons learned about EA that could be useful to developing countries, countries in transition and others just now considering adoption of environmental assessment?

In today's rapidly changing world, where countries are eager to promote growth and attract foreign investments to alleviate poverty, can national and local impact assessment requirements be conceived independently from political, socio-economic, scientific and technological contexts? Is impact assessment appropriate as a process and a tool only to a given level of development, public consciousness, democracy and technological advancement? Or is impact assessment "neutral," readily transposable to all country contexts, including developing countries and countries with emerging economies? The IAIA'03 conference event offers an opportunity for experts, decision-makers, industry, and professionals of different visions and expertise to explore this issue.

Papers, posters, and workshops are invited on all aspects of the conference theme. For submission instructions or more information on IAIA'03, please visit our web page ([www.iaia.org](http://www.iaia.org) > Conference) or contact Bridget John at [bridget@iaia.org](mailto:bridget@iaia.org) or +1.701.297.7908.

The International Association for Impact Assessment is an interdisciplinary society dedicated to developing international capacity to anticipate, plan and manage the consequences of development. The Association has over 2,500 members in over 100 countries. IAIA seeks to ensure that those making decisions understand their political, environmental, social and technological dimensions.

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## **WEB-SITES**

### ***Environmental Dynamics***

There have been some changes in the Environmental Dynamics websites - both in structure and contents.

The gateway [www.utad.pt/ed](http://www.utad.pt/ed) which stands for "Environmental Dynamics" is hosted by the UTAD server.

There are eleven other websites, each one with a specific function, marked by an easy "add-on" to the previous URL - e.g. the ED Library is accessible at [www.utad.pt/ed/library](http://www.utad.pt/ed/library)

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