

SEA and Integration of the Environment into Strategic Decision-Making

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Executive Summary

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Aims and Objectives

The aim of the research was to evaluate the role of Strategic Environmental Assessment (SEA) in integrating the environment into strategic decision-making. The focus was on the way in which environmental considerations are included in policy, plan and programme decision-making in all sectors (including e.g. health, transport, education, defence etc), rather than simply raising the profile of environmental policies within government and institutional agendas. In particular, a key objective was to evaluate processes, institutions, communication mechanisms and tools within the policy making process. It was not explicitly addressing the wider integration associated with sustainable development, i.e. integration of environment, social and economic factors. However, sustainable development mechanisms are often driven by the need to integrate the *environment* into decision-making processes, and so there is an important link between the two types of integration. Particularly pertinent to this research has been the political agreement on 16 March 2001 of the forthcoming SEA Directive. The outcomes of this research are likely to inform implementation strategies for the Directive over the next three years.

The report is structured in three main parts: the Main Report (Volume 1), the Country Reports (Volume 2) and the Case Study Reports (Volume 3). The research consisted of a review of relevant literature, and of SEA and integration practice in all EU countries, as well as some non-EU countries and international financing institutions. This was followed by detailed analysis of 20 case studies, from which key success factors and recommendations were drawn. Three key models of processes, institutions and communication mechanisms utilised for environmental integration are identified (with examples) below:

Constitutional/Legislative Model

- Specific legal provisions for environmental protection and integration in a country's constitution
- 'Consolidated' Legislation (use of generic or framework cross-sectoral legislation)
- Legislation that imposes duties on public bodies

Process/Strategy Model

(co-ordinated, government-led strategy for environmental integration)

- Greening Government
- Sustainable Development Strategies
- Local Agenda 21
- Land Use Planning

Ad hoc Institutional Model

(may exist outside of a centrally co-ordinated strategy)

- Audit Committees/Independent Auditor
- Environmental Protection Agencies and Authorities
- National Commissions/Councils on Sustainable Development
- Round Tables

In reality a mixture of these elements can be found in each country studied. From the literature review and surveys carried out, a list of possible 'tools' for achieving varying degrees of integration of the environment at the policy level were identified:-

- SEA
- Strategic Environmental Analysis (SEAN)
- E-test
- Environmental Appraisal/'Audit'
- Sustainability Appraisal/Assessment
- Integrated Environmental Assessment
- Economic Tools/Instruments
- Green Accounting
- Environmental Management Systems
- Objectives, Targets and Indicators
- Environmental Monitoring and Reporting
- Public Participation, Education and Awareness Raising
- Matrices/Appraisal Tables

The tools being used tend to be those that are process/institution oriented, rather than overly technical or technological. This is not surprising, given that strategic decision-making and agenda setting is being carried out by politicians and stakeholders, rather than solely by experts. This relationship between processes and methodologies has been fundamental to this study. The fact that many of the tools being used

to integrate the environment are process/institution based emphasises the need to establish clear and effective processes rather than complex methodologies which may not, or cannot, be used in the absence of a suitable process. Process-based tools are practical for use in a fluid and politicised decision-making process, and offer the opportunity for some, if not full, integration where a method-based tool is more likely to be left on the shelf or poorly applied. Process-based tools also lend themselves more to public involvement; complex methodologies dependent upon experts do not, and can generate distrust amongst the wider community. Some methodologies may require technical input, such as measurable indicators (e.g. those for air or water quality), but in this case there is nothing inherently complex about their use.

The role of SEA and other tools in achieving integration is highly variable. At the most strategic policy levels the use of *ad hoc* institutions and processes for achieving integration appears to be more popular, at the moment, than formal procedures or tools such as SEA. SEA may be part of the bigger process, perhaps operating under the policy framework created by the institutions and processes. Politically, there have been concerns about applying SEA at the policy level for fear of constraining political choice. In some countries, forms of SEA, e.g. SEA of Bills in Scandinavian countries, have been developed, which create a framework within which subsequent SEAs and EIAs can take place ('tiering approach', see Recommendation 6). In others, more sceptical of imposing rigorous SEA on a fluid policy process, wider policy appraisal models can be seen to be favoured, including the development of sustainability appraisal (e.g. in the UK).

Case studies

Twenty detailed case studies – from EU and Non-EU countries and from one international financing institution, reflecting a range of SEA and integration mechanisms and geographical spread, were selected and are listed below: -

- Austria:** Local Agenda 21 Graz (2000).
- Austria:** SEA of Land Use Plan of Municipality of Weiz (Styria) (1999).
- Canada:** Framework for SEA of Trade Negotiations (1999).
- Denmark:** SEA of Report on National Planning 1999/2000.
- Finland:** Thematic Evaluation on Environment and Development in the Finnish Development Co-operation, Ministry for Foreign Affairs (1998).

- France:** SEA and Multi-Modal Infrastructures: the case of the North Corridor (1999).
- Germany:** Land-Use Plan and Integrated Landscape Plan Erlangen (2000).
- Ireland:** Marine & Coastal Areas and Adjacent Seas (1999) – part of North Atlantic assessment under OSPAR Convention.
- Ireland:** Eco-Audits (Appraisals) of: Pilot Eco-audit of National Development Plan 2000 – 2006 (2000).
- Netherlands:** National Environmental Policy Plan 3 (1998).
- New Zealand:** Canterbury Regional Council – Local Environmental Management Strategies and Stakeholders (2000).
- Portugal:** National Council for the Environment and Sustainable Development (1999).
- Slovak Republic:** Land-Use Plan Bratislava (2000).
- Spain:** Regional Development Plan 2000-2006 (Objective 1) (2000).
- Spain:** Castilla y Leon: SEA for Wind Power Regional Plan (1999).
- Sweden:** Drinking Water Supply for the Stockholm Region (1997).
- UK:** Greening Government: Environmental Audit Committee and Green Ministers (2000).
- UK:** Yorkshire Forward Sustainability Appraisal (1999).
- UK:** Strategic Defence Review (2000).
- World Bank:** Country Assistance Strategies and The Environment Programme.

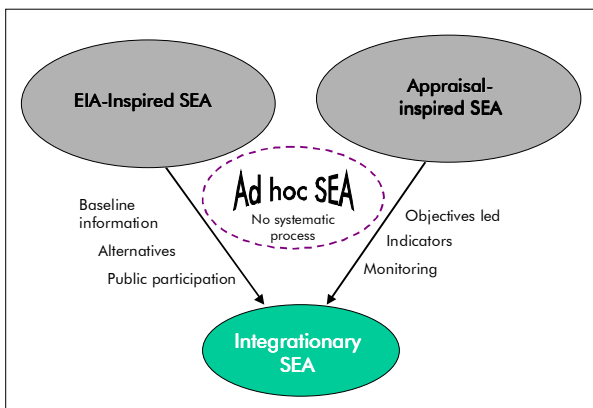
These enabled the identification of four broad models of SEA that embrace environmental integration and SEA's role within it (see Figure 1 below):-

- **EIA-inspired SEA:** originating from ecological and/or resource management disciplines, and includes a base line assessment of preferred option or alternative locations. There is more emphasis on technical methodologies and a necessity to undergo a systematic assessment procedure. This form of SEA is generally used at the programme level and often is an incremental development from EIA.
- **Policy analysis/appraisal-inspired SEA:** originating from political science. Impacts of a preferred option are appraised against objectives, there is no baseline survey, and often little or no direct public participation. This model is often seen within regional and spatial land use planning, and sustainability appraisal.
- **Integratory SEA:** focuses on an objectives led process, and is a combination of the first

two models. Impacts are appraised against a combination of an environmental baseline survey and objectives. The process begins early in the development of the policy and investigates alternative means of achieving those objectives. Public participation is normally an important component of the process. This form of SEA is most likely to be found where there is a strong national environmental legislation and policy framework.

- **Ad hoc mechanisms of environmental integration:** a collection of independent institutions and processes such as roundtables, audit committees and state of the environment reports. These tools often fulfil similar roles found within elements of an SEA. However, there is no systematic process providing discrete hooks into the developing policy.

Figure 1: The Relationship between Different Forms of SEA



This classification focuses on the origins of the SEA types that exist today. The research has, consequently, suggested that SEA can be seen to originate from two main disciplines: natural resource management and political science. The research also indicates that in terms of integration it is a hybrid of both these schools that forms the optimum SEA process. Figure 1 demonstrates diagrammatically the relationship between the four SEA types discussed previously, showing how EIA-inspired SEA and Policy/Plan Appraisal SEA combine to form Integratory SEA. Ad hoc SEA exists separately, but within this model, as elements of both EIA-inspired and Appraisal-SEA help inform the institutions and processes seen within it.

From the overall analysis the following themes relating to SEA's role in environmental integration were identified:

- **Advocacy:** SEA can act as an advocate for the environment within policy and plan making.
- **Awareness Raising:** SEA also plays a more subtle environmental awareness-raising role.
- **Co-ordination and Communication:** Tiered SEA creates essential links between the different levels in the policy and planning hierarchy, and similarly within different institutions and processes.
- **Guidance and Training:** SEA can be the catalyst to guidance and training.
- **Information:** SEA allows more informed decisions to be made regarding trade-offs between environmental, economic and social factors.
- **Accountability:** SEA creates an auditable trail, which helps increase transparency and accountability.
- **Catalyst for Further Mainstreaming Initiatives:** SEA can act as a catalyst for further institutional and organisational changes.
- **Education and Social Learning:** SEA facilitates decision-makers, practitioners and stakeholders in learning from the process and each other.
- **Selection of the Most Sustainable Option:** consideration of alternatives allows the earlier integration of environment consideration within policy making.
- **Monitoring and Quality Control:** SEA provides the baseline information and prediction of impacts necessary to undertake monitoring and ensure effective quality control.

From these themes the following key success factors were identified:-

Key Success Factors

- SEA needs to be a transparent process that allows environmental considerations to be highlighted.
- Successful SEA assesses the impacts of alternative options rather than option alternatives.
- Widespread involvement of stakeholders, policy makers and the wider public is crucial for successful SEA.
- SEA needs to be a systematic process involving different institutions in a common reporting framework
- The most successful SEA generally occurs where there is a legal obligation to require it.

- ❑ Successful SEA involves wide use and dissemination of baseline and assessment information.
- ❑ An independent body that can review or audit the assessment process and content is needed to provide sufficient incentive to carry out SEA and accountability.
- ❑ Successful SEAs have been the start rather than the end of a process of integration, and may be a catalyst for developing further guidance and training.
- ❑ Successful SEA is an active, participatory and educational process for all parties, in that stakeholders are able to influence the decision-maker, and the decision-maker is able to raise awareness of the strategic dimensions of the policy, plan or programme.
- ❑ Successful SEA is a continuing and iterative process in which the decision-maker is constantly being updated with the consequences of the implementation of the policy.
- ❑ Successful SEA depends on high quality and rigorous application of assessment methodologies, whether qualitative, quantitative or both.

Discussion and Conclusions

A discrete process designed to inform the policy-making process of the environmental consequences at key points is both desirable and feasible. SEA should begin at the outset of the policy-making process and run parallel to it throughout, covering alternative options for achieving the objectives set out in both the policy and the SEA. Integrating the environment implicitly rather than explicitly within the policy-making process may lead to trade-offs being made earlier on in a less transparent way. Although not essential, the most 'effective' SEA (in terms of immediate SEA outcomes) occurs when there is a legal obligation to undertake it. However, at the highest policy levels it is most important that the legal obligation should be prescriptive in terms of outcomes, rather than in procedure and methodology. Once the requirement for an SEA is established the next most important requirement is guidance. This guidance should advocate a flexible process that draws particularly on existing environmental integration institutions and mechanisms. The guidance should advocate the extensive use of public participation, but framed in such a way that it is a two-way process providing information to all parties, a wider education role and influencing the decision-making process. Finally, training will

also increase the long-term effectiveness of the SEA.

The SEA Directive will provide a systematic process for integrating the environment into decision-making at the plan and programme level in EU Member States. This study has shown that SEA can also provide a means of integrating the environment into higher policy level decision-making, through EIA-inspired SEA or through policy appraisal-inspired SEA, or in an ideal form of 'integratory' SEA which combines key elements of both. Some of these elements are already in existence at the policy level and could be more effectively linked and supplemented to create more systematic integratory SEA processes. In reality, there already exists considerable experience of a wide variety of integration mechanisms that can be drawn upon. As the SEA Directive is implemented in Member States at the plan and programme level, so attention will be drawn to policy level decision-making, to ensure that the environment is effectively integrated at an early enough stage. The SEA Directive may also, therefore, act as catalyst to SEA at the policy level as well as formally requiring SEA at the plan and programme levels.

Recommendations

The 20 recommendations below - to Member State governments, the European Commission, agencies, institutions and stakeholders - on how SEA can be best integrated into policy making, are grouped into the following six themes:

- ❑ Applying SEA at the most strategic levels of decision-making (1 to 5)
- ❑ Promoting effectiveness of integration (6 to 8)
- ❑ Public and stakeholder participation (9 to 10)
- ❑ SEA and Sustainability Appraisal (11 to 13)
- ❑ Undertaking SEA (14 to 17, and
- ❑ Guidance and training (18-20)

Recommendations

Applying SEA at the most strategic levels of decision-making

- 1. EIA-inspired or policy appraisal-inspired SEA, even if only partial, can provide a useful starting point for subsequent development into more extensive and integratory SEA.**
SEA is evolutionary rather than revolutionary; it takes time for a significant change in approach to be achieved. Policy SEA needs to be as systematic as possible, but needs to be flexible and dynamic, reflecting more closely the nature of strategic policy and decision-making.
- 2. A flexible form of SEA is needed at policy-making levels, and existing strategic processes should be examined for compatibility to the SEA process.**
There may be elements of SEA already in place. Member States should examine existing processes explicitly in terms of SEA, to encourage a more co-ordinated approach to integration and other SEA elements to be developed. SEA may be revealed as less demanding and radical than first thought. For example, a State of the Environment report might equate to baseline information; a Sustainable Development Roundtable might perform the equivalent of a scoping process.
- 3. SEA should be promoted as a means of changing attitudes and culture within organisations and government departments.**
SEA offers an opportunity to bring about a real change of attitude and culture at strategic levels within an organisation or government department, by acting as a catalyst to integrating the environment. While SEA can help bring about change, in some countries policy making has traditionally been beyond the public domain, and so a change in culture may be needed before SEA can have a further catalytic role.
- 4. The scope of SEA should not be unduly constrained, otherwise it will not be strictly strategic.**
Options, alternatives and questions of need are a prerequisite for a *strategic* assessment. SEA should start as early as possible in the policy and decision-making process and alternatives considered appropriate to the level of decision-making.
- 5. Effort should be concentrated on establishing appropriate communication processes and networks, and putting in place engines for change.**
SEA at the most strategic levels is about process more than methodology, more about change of culture and attitude than about immediate outcomes. At the policy level SEA becomes focused on communication and participation with stakeholders.

Promoting effectiveness of integration

- 6. A tiered approach to SEA should be adopted to help promote the integration of the environment into decision-making.**
In the absence of tiering, communication processes become broken or interrupted, creating dissonance with other levels of decision-making. Tiering also provides a means and an incentive for auditing and monitoring.
- 7. Auditing, monitoring and quality control should be an integral component of any SEA process.**
Since the policy process is often cyclical, feedback from the SEA to and throughout the policy process is essential if integration is to be made effective (e.g. through the use of indicators). The consequences of strategic decisions can have long term implications at all subsequent lower levels of decision making. In addition, parallel scientific evaluation of the SEA can support the development of best practice models and methodologies. Resources will need to be allocated for these purposes, and some form of independent body is recommended (e.g. an audit committee).

8. Effectiveness of integration should be measured in the long term, rather than simply by short-term output and outcome performance measures.

Untangling effectiveness is difficult, as there are invariably a multitude of factors associated with the implementation of policy decisions. The full benefits of an SEA process may only be recognised some time after a culture change has been initiated.

Public and stakeholder participation

9. Good SEA needs transparent and participatory processes and decisions.

The development and application of appropriate methods of engaging stakeholders and the public at strategic levels can be difficult, but nonetheless essential. Particular effort is required to identify the 'affected public'. NGOs may be able to act as a proxy for the wider public, but it should not be assumed they can in all cases. It may be necessary to establish an organised and/or qualified public for the purpose. Reference should be made to the Aarhus Convention for minimum requirements. Transparency requires decisions to be explained, e.g. as to how the SEA informed the decision.

10. Stakeholders and the public should be encouraged to think as strategically as possible, to help avoid the 'hijacking' of the SEA by more parochial views.

Many stakeholders may be more interested in the detail of implementation on the ground (i.e. subsequent lower level decision-making, in the form of projects and site-specific details). This can force the SEA process to attempt to address solutions rather than problems and at a level of detail that is inappropriate for a truly strategic consideration of options.

SEA and Sustainability Appraisal

11. SEA and sustainability appraisal should be seen as complementary and not substitutes for each other.

Care is needed to ensure the environment is not diminished in decision-making as a consequence of taking a more integrated approach through sustainability appraisal (SA). SEA and SA have different objectives and should be conducted together or their processes integrated to ensure the environment does not lose its explicit recognition in decision-making. Trade-offs should be transparent and the responsibility of the decision-making process, rather than the tool being used.

12. SEA can strengthen wider sustainability appraisal where it brings baseline information together with objectives led assessment.

SEA can help ground a wider sustainability appraisal in the real world through the evaluation against baseline data as well as more abstract objectives. SEA offers an opportunity to ensure that the environment is integrated into strategic decision-making *explicitly*.

13. The reasons for including certain socio-economic impacts, and to what extent, within SEA should be made explicit.

It may be appropriate to include in SEA those socio-economic impacts that are associated with or are a consequence of environmental impacts and which otherwise may not feature in decision-making (e.g. noise is a direct environmental impact, but its effects on house prices might be regarded as a secondary, socio-economic effect). This is important to help foster a better understanding and definition of the boundaries between SEA and sustainability appraisal.

Undertaking SEA

14. There should be a named, senior individual responsible for the co-ordination and delivery of any SEA and also a named individual responsible for the communication of any SEA process.

It is important to provide the necessary leadership and strategic perspective on the whole process. Communication may be focused on another individual, but a single contact point is essential. An open and transparent process can help create new networks and enable effective communication

between parties and individuals. The use of the Internet and web pages should become standard practice for disseminating information relating to the SEA.

15. Emphasis needs to be placed on 'building the right team' of experts in any SEA or wider appraisal.

This becomes especially important the wider the appraisal. Having, for example, social, economic, health impact, and public participation professionals in a team, as well as environmental experts, becomes particularly important in sustainability appraisal. Encouraging interdisciplinary working can be a challenge in itself.

16. Greater effort is needed to improve the quality of baseline information against which policies and options can be assessed.

This can be achieved, for example, through the development of indicators and the production of State of the Environment reports at all levels - national, regional and local, and through developing improved consistency in data collection and GIS systems. Lack of data consistency can be particularly problematic in the case of transboundary impacts, at whatever level. GIS can aid strategic thinking and so help avoid the diversion of the SEA to less strategic levels.

17. Lessons should be learned from the implementation of the SEA Directive at plan and programme level for wider application to policies.

The fact that the SEA Directive does not yet apply to policies should not be a reason for not applying SEA to more strategic policy making levels. The application of SEA at plan and programme level as a result of the SEA Directive is likely to expose policies to greater scrutiny, just as EIA has exposed decisions made at plan and programme level. Legislation at the EU level is likely to be desirable in the future to encourage a more systematic approach to SEA of policies.

Guidance and training

18. Guidance and training is essential to take forward SEA.

It cannot be assumed that personnel will have the capacity or capabilities to do so otherwise. It is also an important component of wider awareness raising and communication strategies. This is likely to require the commitment of new resources, in staff and financial terms.

19. Mechanisms need to be developed within government departments and organisations to foster and retain 'institutional memory'.

Institutional memory on environmental integration and SEA is hampered by the frequent change of personnel typical of government institutions. Guidance and training is essential in this respect, through induction and ongoing programmes, so as not to rely unduly on the special competencies of individuals.

20. Guidance should be developed by the European Commission for carrying out SEA at the most strategic policy levels.

Guidance similar to that developed for plan SEA in advance of the SEA Directive is needed. The evidence suggests that where guidance exists, along with the political will to use it, it can be effective in promoting the integration of the environment into the most strategic decision-making.

This research was carried out by a consortium led by Imperial College Consultants Ltd, and comprising:-

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