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What is Strategic Environmental Assessment (SEA)?

Strategic Environmental Assessment is a tool used to consider the potential impact of proposed plans, policies and programmes on the environment. By taking into account the environmental issues, as well as the social and economic factors at the strategic decision making level, SEA can also be used to contribute to Sustainable Development. It has long been recognised that policies, plans, and programmes, examined for their economic and social implications, but not their environmental impacts, have resulted in significant environmental damage. SEA enables an assessment with a specific focus on the environment. For example an SEA of a national energy policy would take account of the environmental impacts associated with coal fired production as against other alternatives.

Background to SEA

The examination of potential impacts, prior to development, is a concept that has been applied through project level Environmental Impact Assessment (EIA) since the 1960's (See EIA 'e-briefing'). Despite the acknowledged benefits of EIA, at the stage at which it is employed the opportunity is often no longer available to decide whether, where, when and what form of development is environmentally appropriate. Project EIA also fails to adequately deal with the cumulative or incremental impacts of a number of smaller projects. SEA is a tool for looking at these problems further up the decision making hierarchy whilst strategic options for environmental protection and enhancement are still available.

Unsurprisingly SEA has developed out of the implementation of project EIA. The US National Environmental Policy Act (NEPA, 1969) established project EIA, but was intended to apply to 'legislation and other major actions' as well. Aspects of SEA could be seen in EIA processes in Canada and Australia in the 1970's. From the 1980's onwards, other countries began to make some provision for SEA including Denmark, New Zealand, UK, and Slovakia amongst others.

SEA and its Application

SEA is a broad concept that can be interpreted differently in terms of scope, role, and purpose. The use of SEA varies between and within countries, and is applied through different systems and models.

- EIA based: SEA carried out under EIA legislation (Netherlands) or procedures (Canada)
- Environmental Appraisal: SEA provision is made through a comparable, less formalised process of policy and plan appraisal (UK)
- Dual-Track system: SEA arrangements are differentiated and implemented as separate processes (e.g. the Netherlands' e test (or appraisal) of legislation and Strategic EIA of specified plans and programmes)

- Integrated policy and planning system: SEA elements are part of effects-based policy and plan-making (New Zealand)
- Sustainability appraisal: SEA is replaced by integrated (social, economic and environmental) assessment and review of major policy and planning issues (e.g. UK sustainability plans)

Current SEA practice focuses mainly at the *plan and programme* level, on sectors identified as being likely to have significant environmental effects, e.g. transport and energy. SEA has also been applied to *regional level development programmes and spatial plans*. Prime areas for application of SEA include any plans or programmes that concern land use and natural resources, extraction of raw materials, and waste and pollution generating activities. World Bank development programmes and lending are subject to environmental assessment, however comprehensive SEA systems are very few and far between. In general there needs to be a shift towards SEA of *policies*, although this may take some time and thought to get to grips with.

The EU SEA Directive

As part of the drive towards Sustainable Development, the EU's 6th Environmental Action Plan has SEA at its core. The European Commission recently adopted a Directive on Environmental Assessment of Certain Plans and Programmes (the 'SEA Directive' 2001/42/EC). This Directive has to be interpreted and implemented in EU member states by 21st July 2004, and will formalise SEA practice across Europe.

The SEA Directive requires an environmental assessment of certain plans and programmes (not policies) which are likely to have significant environmental effects. A formal environmental assessment is mandatory for;

- plans and programmes for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning, or land use;
- which set the framework for development consent of projects (listed in Annex 1 & 2 of the EIA Directive 85/337/EEC); or
- where an assessment has been deemed necessary under Directive 92/43/EEC (the Habitats Directive).

Main Requirements of the SEA Directive

As with project EIA, an SEA must result in the output of an environmental report that complies with the requirements set out in Annex 1 of the SEA Directive. The report must contain;

- an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes;
- the relevant aspects of the current state of the environment and the likely baseline without implementation of the plan or programme;
- the environmental characteristics of areas likely to be significantly affected;
- any existing environmental problems which are relevant, in particular those relating to any areas of particular environmental importance (such as areas designated under the Habitats Directives);

- the environmental protection objectives, which are relevant to the plan or programme, and the way the objectives and any environmental considerations have been taken into account;
- the likely significant effects on the environment (biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between the above factors) including secondary, cumulative, synergistic, short, medium and long term, permanent, temporary, positive and negative effects;
- the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment as a result of the plan or programme;
- a description of the measures envisaged concerning monitoring; and
- a non technical summary.

(Source: EC 2000)

Article 6 of the SEA Directive refers to the necessity to engage in consultation with both relevant environmental authorities and the public during the assessment, and for a reasoned decision to be made available to the public at the conclusion of the decision making process.

There is also a requirement for EU Member States to ensure that the quality of the environmental reports produced meet the standards of the SEA Directive. This will potentially involve the implementation of some form of legal review process.

Future Direction of SEA

In the UK, both the Scottish Executive and the Office of the Deputy Prime Minister (ODPM) have been working out how the SEA Directive will be transposed and implemented. ODPM has published guidance for planning authorities on the SEA of spatial and land use plans, whilst the Scottish Executive have published interim planning advice. However there is very little practical guidance on how to conduct 'an SEA', because there is no such thing as a 'typical SEA'. Instead broad frameworks and principles have been developed to help guide the process (Verheem and Tonk 2000, UNECE 1992, DETR 1998, Sadler and Verheem 1996, Sadler and Brook 1998). Experience of SEA to date, in the UK and overseas, will help in the development of guidance for areas with little experience in conducting strategic level environmental assessment.

Current practice suggests that SEA will develop along two lines. One focusing on SEA as a tool for assuring the environmental sustainability of plans and programmes, based on a check list approach. The other uses SEA as an interim measure for ensuring early consideration of the environmental sphere, before moving towards a true 'sustainability appraisal'. As individual countries develop their SEA processes and move towards a formalised system, it is likely that there will develop a more integrated approach to decision making incorporating the environmental, social and economic, and with the aim of this being applied to policies at the highest level. This however, presents the danger of integration being used as a means of trading economic benefits for adverse environmental effects. Additionally several barriers will need to be overcome if the move towards SEA of policies is to be achieved. Not least that the reality of policy formation is that it can be an intangible and sometimes instantaneous process, especially at the highest tier of decision making.

Links and Further Reading

Department of Environment, Transport and the Regions (1998) *Policy Appraisal and the Environment - Policy Guidance* HMSO, London, UK

Sadler and Brook (1998) *Strategic Environmental Appraisal* Department of Environment, Transport and the Regions, London, UK

Sadler and Verheem (1996) *Strategic Environmental Assessment: Status, Challenges and Future Directions* Ministry of Housing, Spatial Planning and the Environment, The Hague

United Nations Economic Commission for Europe (1992) *Application of Environmental Impact Assessment to Policies, Plans and Programmes* UNECE Environmental Series No.5, Geneva

Verheem and Tonk (2000) *Strategic Environmental Assessment: One Concept, Multiple Forms Impact Assessment and Project Appraisal* 18(3):177-182

www.scotland.gov.uk/planning - Scottish Executive Interim Guidance on the Environmental Assessment of Development Plans

www.planning.odpm.gov.uk - Office of the Deputy Prime Minister SEA Guidance for Planning Authorities, London, UK

www.taugroup.com/ansea - EU research programme Analytical Strategic Environmental Assessment

www.worldbank.org – Information on SEA development worldwide and for World Bank operations

www.europa.eu.int – Access to the European Commission's environment site and information on SEA and EIA

Note

The e-briefing was written in January 2004 and placed on the site in May 2004.