This paper introduces strategic environmental assessment (SEA) and the UNECE Protocol on SEA. It also describes the benefits and costs of SEA, and outlines resources available to develop capacity and assist in the application of the Protocol, notably a Resource Manual to Support Application of the Protocol.

What is SEA?

Various definitions of SEA are enshrined in law or policy or referenced in the literature on the topic. As generally understood, SEA is a systematic and anticipatory process, undertaken to analyze the environmental effects of proposed plans, programmes and other strategic actions and to integrate the findings into decision-making.

The United Nations Economic Commission for Europe (UNECE) Protocol on SEA was adopted in Kiev in May 2003 and subsequently signed by 37 States and the European Community. However, signature is only the first stage – 16 UNECE member States need to ratify, accept, approve or accede to the Protocol for it to enter into force; this is expected in 2010. Once in force, any Member State of the United Nations may accede upon approval to the Protocol.

Under the Protocol, the term ‘SEA’ has a specific meaning:

- the evaluation of the likely environmental, including health, effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying-out of public participation and consultations, and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme (art. 2, para. 6).

The purpose of SEA, broadly stated, is to ensure that environmental considerations inform and are integrated into strategic decision-making in support of environmentally sound and sustainable development. In particular, the SEA process assists authorities responsible for plans and programmes, as well as decision-makers, to take into account:

- Key environmental trends, potentials and constraints that may affect or may be affected by the plan or programme
- Environmental objectives and indicators that are relevant to the plan or programme
- Likely significant environmental effects of proposed options and the implementation of the plan or programme
- Measures to avoid, reduce or mitigate adverse effects and to enhance positive effects
- Views and information from relevant authorities, the public and – as and when relevant – potentially affected States

SEA has evolved largely as an extension of project-level environmental impact assessment (EIA) principles, process and procedure and this is certainly the case with respect to the SEA Protocol. But it also offers a number of advantages compared to the EIA of projects. These follow from SEA application to the higher level of plan and programme making, which sets a framework for projects subject to EIA and potentially many other actions that may have an impact on the environment.

At this level, SEA facilitates consideration of the environment in relation to fundamental issues (why, where and what form of development) rather than addressing only how an individual project should be developed. The potential for environmental gain is much higher with SEA than with EIA.

In that regard, the specific value added by SEA of plans and programmes includes:

- The opportunity to consider a wider range of alternatives and options at this level
compared with the project stage

- Influencing the type and location of development that takes place in a sector or region, rather than just the design or siting of an individual project
- Enhanced capability to address cumulative and large-scale effects within the time and space boundaries of plans and programmes as opposed to the project level
- Facilitating the delivery of sustainable development through addressing the consistency of plan and programme objectives and options with relevant strategies, policies and commitments
- Streamlining and strengthening project EIA by “tiering” this process to the SEA report and thereby avoiding questions (whether, where and what type of development should take place) that have been decided already with environmental input

What is the value of SEA?

The immediate benefits of SEA application can be found in information that assists sound decision-making and in the consequent gains achieved in environmental protection and sustainable development. In addition, there are other, secondary benefits that are integral to the participatory approach and transparent procedures followed in accordance with the SEA Protocol. When properly implemented, the SEA process should:

- **Provide for a high level of environmental protection**
  
  This is the stated objective of the SEA Protocol (art. 1); it defines the reason why SEA is undertaken. A high level of environmental protection may be subject to different interpretation but, at a minimum, SEA should ensure avoidance of irreversible and severe effects, safeguard protected areas and sites, and maintain critical habitats and other areas important for the conservation of biodiversity.

- **Improve the quality of plan and programme making**
  
  Whether undertaken in parallel to or as an integral part of plan and programme making, SEA has the potential to improve or reinforce the quality of the plan or programme, leading to better outcomes. It does so in a number of ways but particularly by helping to ensure that the process is focused, rigorous, open to alternatives and considers the full range of potential effects and opportunities for achieving more sustainable forms of development.

- **Increase the efficiency of decision-making**
  
  SEA helps to streamline decision-making by enabling environmental issues to be taken into account consistently at the different stages or tiers of decision-making. Time efficiency (and as a consequence cost effectiveness) is expected to be improved by better and more consistent decision-making at the plan or programme level, leading to fewer appeals and less discussion at the operational or EIA level. Ultimately, SEA supports project-level decisions as these can be based on previously optimized plans and programmes. The shared use of information produced at different stages of the planning hierarchy may also increase the efficiency of decision-making.

**Box: SEA for mineral policy development, Mongolia**

A training workshop on SEA for artisanal and small-scale mining, held in Ulaanbaatar in September 2007, concluded that SEA had the potential:

- To provide for an integrated approach to artisanal and small-scale mining issues and to help achieve the goal of developing artisanal mining into a formal, legal and responsible sub-sector of mineral development.
- To leapfrog project-level environmental impact assessment, which was out of reach of individual operators (and which would in any case be impractical for artisanal and small-scale mining), to the central and regional planning and programming levels.


- **Facilitate the identification of new opportunities for development**
  
  SEA facilitates the improved consideration of environmental limits in the formulation of plans and programmes. It helps in considering alternatives and encourages the search for win-win options that open opportunities for new developments within the carrying capacity of ecosystems. SEA thus supports a shift of decision-making towards genuine sustainable development.

- **Increase capacity to adapt to climate change**
  
  SEA may help to ensure that plans and programmes take full account of climate issues. The Intergovernmental Panel on Climate Change notes “One way of increasing adaptive capacity is by introducing the consideration of climate change impacts in development planning, for example, by including adaptation measures in land-use planning and infrastructure design.”

- **Help to prevent costly mistakes**
  
  SEA provides early-warning signals about environmentally unsustainable development options. A sound application of SEA may
therefore limit the risk of costly remediation of avoidable harm or corrective actions, such as relocating or redesigning facilities. SEA also helps in saving human and financial resources in the development of plans and programmes as unsustainable options can be disregarded early on.

**Box: SEA of draft law on waste, Georgia**

A voluntary SEA of the draft law on waste was carried out as a pilot project, without any legal or procedural requirements. Two alternative drafts were prepared, one by the waste department, the other by an NGO-cum-research-institute.

The starting point was an analysis of the decision-making process, and its discussion and policy context, asking what SEA could add to the process. The SEA identified the main effects of the alternative drafts and provided a framework for comparing their ability to meet public health, transport and EU waste objectives. The final report was concise with little technical detail. The other effects of the SEA were:

- A more focussed dialogue, making plain the key differences between the alternative drafts
- The opportunity to draft a law that incorporated the best elements from each of the alternatives
- SEA subsequently applied to the national waste strategy of Georgia


**Strengthen governance**

SEA increases the overall transparency of strategic decision-making and allows the early consideration of the opinions of key stakeholders in the plan- or programme-making process. Properly undertaken and accountable SEA enhances the credibility of plans and programmes. It may mobilize public support for implementation – a plan or programme may be more effective when the values, views, opinions and knowledge of the public have become part of the decision-making process.

**Facilitate transboundary cooperation**

SEA can provide an important arena for regional cooperation to address difficult issues concerning, for example, shared protected areas, waterways, transport connections and transboundary pollution.

**Costs of SEA**

An EC study on the costs and benefits of EIA indicated that introducing SEA to regional and local land-use planning usually increased planning costs by 5-10%. This study also found examples of good SEAs that increased planning costs by less than 5%, but the costs depend on the amount and detail of alternatives elaborated and their assessment.

A more recent study on the first year of application of the SEA Directive in the United Kingdom, which surveyed 201 authorities that had conducted SEAs, concluded that most SEAs required approximately 70-80 person days to complete (roughly half for scoping and half for the environmental report). At the same time, the majority of respondents consulted in this study agreed or strongly agreed with the statement that 'SEA was an effective use of time and resources'.

The main costs associated with the operation of an SEA system occur during the initial applications of SEA when appropriate approaches and tools are tested and developed, and when basic data sets are compiled. Subsequent SEAs tend to be less costly as they can build on previous experience and may require only standard analytical work and process management. (Indeed, respondents to the latter above-mentioned study indicated that they expected future SEAs to take considerably less time.)

These costs can be regarded as marginal compared with the overall costs of implementation of plans and programmes.

**Resources to help apply the Protocol**

To help countries implement and apply the Protocol, a number of resources are available:

- **Resource Manual**

The main tool is the *Resource Manual to Support Application of the UNECE Protocol on Strategic Environmental Assessment*, which was developed as decided by the Meeting of the Signatories to the Protocol.

The Manual does not constitute formal legal or other professional advice, but instead provides guidance to those applying the Protocol or supporting others in doing so by:

- Highlighting the main requirements of the Protocol on SEA
- Outlining the key issues for applying the Protocol in practice
- Providing materials for training and capacity-development programmes supporting application of the Protocol

The Manual is expected to be used by:

- Those who want to learn about the Protocol and the theory of its application, including government and other officials working on the application of the Protocol, practitioners carrying out SEAs and stakeholders wishing to participate in the SEA process
- Those who want to advise and train others on the Protocol’s requirements and the application of SEA
The Manual is divided into two parts, reflecting the dual nature of the target audience:

- Part A for those applying the Protocol
- Part B for trainers and others developing capacity to apply the Protocol

These two parts each comprise a series of chapters that are autonomous but interlinked:

**Part A: Application of the Protocol**
- introduces SEA aims and outlines the concepts, roles and evolution of SEA
- identifies linkages between SEA and plan- and programme-making processes
- describes how to determine whether SEA is required under the Protocol
- describes the SEA of plans and programmes under the Protocol
- provides an overview of basic applicable tools that may be used in the practical undertaking of SEA
- describes how the Protocol may be applied to policies and legislation

There is also a supplement on the consideration of health as part of SEA.

**Part B: Trainer’s Guide**
- outlines the broad concept of capacity development for the Protocol
- offers a set of tasks that can be used to design practical work on case studies within SEA training and capacity-development programmes

**On-line resources**
The Resource Manual is available on-line. It is backed up by:
- Links to guidance, including on elements of SEA, development sectors and environmental components
- Links to case studies
- Slides corresponding to the Manual

**Needs assessments and national strategies**
The Resource Manual provides a methodology for a capacity-development needs analysis. This methodology has been applied in a number of countries of Eastern Europe and Caucasus – see the website for further information on these analyses.

The countries concerned went on to develop national strategies for SEA capacity-development and for implementation of the Protocol – these too are available on the website.

**Additional training materials**
Institutions have developed training courses based on the above materials and on the OECD/DAC guidance on SEA in development cooperation. Please contact the secretariat for information on access to and use of these materials.

**Subregional cooperation – the Belgrade SEA Initiative**

Armenia, Belarus and the Republic of Moldova proposed an Initiative on SEA at the Belgrade Ministerial Conference “Environment for Europe” in October 2007. The Initiative provides for networking among government officials so as to develop capacity for the introduction of SEA and the implementation of the UNECE Protocol on SEA. Please contact the secretariat or see the website for further information.

**Find out more**

To find out more about the Protocol on SEA, contact the secretariat of its “parent” Convention:

Convention on Environmental Impact Assessment in a Transboundary Context, United Nations Economic Commission for Europe
Address: 429-1, Palais des Nations, CH-1211 Geneva 10, Switzerland
Tel: +41 22 917 1193
Fax: +41 22 917 0107
E-mail: eia.conv@unepce.org

And visit the website [www.unece.org/env/sea](http://www.unece.org/env/sea).

**References**

A study on costs and benefits in EIA/SEA, out of print, but summary available, European Commission, 1996


Benefits of a Strategic Environmental Assessment, Briefing paper. REC (Regional Environmental Centre for Central & Eastern Europe) & UNDP, 2003


Informal – for information only. Many of the resources described in this paper have been developed in collaboration with UNDP and REC.