Chapter 2

SURVEYING THE FIELD OF SEA

During the last decade, a number of reviews of SEA experience have provided perspectives and background on this evolving field. Some of the key references and findings are described in this chapter. These are both incomplete and continually updated by papers on SEA in conference proceedings and journals. In the last five years in particular, the literature on SEA has expanded rapidly. But much of this simply represents the restatement and recycling of basic premises and themes on SEA. It is much less concerned with new insights or methodological advances. In many respects, SEA practice has run ahead of theory in applying the ideas and tools in a policy or planning context.

Not all of this is necessarily called or seen as SEA. Nevertheless, it forms part of a broad and expanding field. For example, during the last decade there has been considerable experimentation and innovation in development planning, urban and rural planning, the development and implementation of national sustainable development strategies and the preparation of poverty reduction strategies. All of these fields have their own literature base[1] with much to offer SEA theory and practice (and vice versa). Yet impact assessment practitioners and development planners and policy analysts appear to occupy different universes. They rarely interact and use `different terminology for approaches and processes that have much in common and could benefit from sharing experience and lessons.

2.1 Overview of the SEA literature and key references

Forms of SEA have been in place since EIA was first introduced in 1969 and, arguably, for an even longer time in land and resource planning practice. For example, the preparation of generic and programmatic environmental impact statements (EIS) has been an integral element of the implementation of the US National Environmental Policy Act (NEPA). Other SEA-type approaches reflect an extension of EIA trends, beginning in the late 1970s and 1980s. These include area-wide and regional assessments, and landscape-level or synoptic methodologies for cumulative effects assessment. Various sources provide references to the early application of environmental assessment to policy (e.g. Sadler, 1986: Wathern, 1988; Jacobs and Sadler, 1989; Bregha *et al*. 1990). Other work carried out through the then Canadian Environmental Assessment Research Council provided the basis for Canada's process of Policy and Programme Assessment. This was established by Cabinet Directive in 1990 as a parallel system to the project-based EIA procedure.

During the1990s, SEA was introduced as a separate process from EIA in a number of other countries. Several perspectives and reviews of SEA were published in 1992, notably a UNECE (1992) report on principals and procedures that were agreed amongst a range of participating countries. Other studies also endorsed the need for SEA, compared its similarities and differences to EIA and elaborated the potential scope of procedure and practice (Wood and Djeddour, 1992; Therivel *et al.*, 1992). The latter also discussed possible methodologies for undertaking SEA. A

[1] For overviews, see Dalal-Clayton and Dent (2002); Dalal-Clayton, Dent and Dubois (2003); OECD DAC (2001); UNDESA (2002); and OECD/UNDP (2002).

special issue of the journal *Project Appraisal* (Vol 7 (3), Sept 1992) examined the (then) status of SEA in the USA, Australia and New Zealand, and the Netherlands, and in relation to land-use planning, the water environment and transport sector. In the overview paper in this volume, Lee and Walsh (1992) examined the reasons for the growth of interest in SEA, focusing on the limitations of project-level EIA. Subsequently, this theme has been returned to by many authors.

In the mid 1990s, the status and effectiveness of SEA processes in leading countries and international agencies were critically evaluated by Sadler and Verheem (1996), as part of the International Study of EA Effectiveness (Sadler 1996). Their analysis was based on a portfolio of 52 case studies and institutional profiles of SEA systems established by leading countries and international agencies. A separate volume was prepared on SEA at the policy level (de Boer and Sadler, 1996). Other than SEA experience at the World Bank, both volumes focused almost exclusively on developed countries (and this emphasis is continued in new updates now in preparation).

Therivel and Partidario (1996) review international SEA guidance and regulations and discuss models and methodologies. They provide a further 10 case studies - one from a developing country (Nepal) - grouped under three categories (sectoral SEAs, SEAs of land-use plans, and SEAs of policies). Several volumes of collected papers review progress in SEA process and practice, internationally. These include the Handbook of Environmental Impact Assessment (Petts, 1999). It includes updates on SEA generally and on particular themes. One of these focuses attention on policy environmental assessment as a separate approach (Bailey and Dixon, 1999). A special issue of *Impact Assessment and Project Appraisal* takes stock of 'SEA at a cross-roads' (Thissen, 2000). Ten papers review the methodological and institutional issues associated with moving from concepts to practice. Other overviews of SEA theory and practice are available in a collection of papers edited by Partidario and Clark (2000). All of these materials focus primarily on the situation in developed countries.

The application of SEA in particular sectors is receiving growing attention (e.g. Goodland 1997; Pinfield 1992; Sheate 1995)[2]. Fischer (2002) provides a systematic analysis of SEA in transport and spatial/land use planning based on 80 assessments in the UK, The Netherlands and Germany. He introduces three main SEA types, with distinct methodological requirements: policy-SEA, plan-SEA and programme-SEA. He also suggests that only a tiered system using all three types is able to meet the requirements formulated in the SEA literature. Transport and land use planning are the two sectors that are generally considered as having the greatest SEA experience. Fischer goes beyond the analysis of procedures, methods and techniques, and also considers the underlying political and planning systems. He found that most authorities believed it was possible to integrate SEA in the processes of developing policies, plans and programmes (PPP); and where such integration had occurred, SEA had performed well. But authorities also thought that SEA would probably delay PPP preparation.

The Second Environmental Assessment Review prepared by the World Bank (1996) covers the period from 1993 to 1995. It contains perspectives and cases from developing countries. But it only briefly considers Bank-specific forms of SEA such as sectoral and regional EA. These are viewed as 'special issues' to be reviewed in depth in the future. The report presents key findings relating to the potential of these instruments, particularly for focusing project level EA. It also

[2] In October 1999, an international conference on SEA for transport was held in Warsaw as a joint initiative of the OECD and The European Conference of Ministers of Transport (ECMT). Sessions focused on: the role and potential of SEA; SEA approaches; Poland and Central and Eastern Europe; and perspectives from financing institutions (see: wwwl.oecd.org/cem/topics/ev/SEA99.htm).

reports that experience with sectoral EA during this period varied. In general, it was narrowly focused on sub-programme components. Regional EA was rarely applied, although some sector assessments incorporated a spatial dimension as part of the analysis.

The Third Review of the World Bank's experience with EA covers the fiscal years 1996 to 2000. Progress in the use of sectoral and regional EA was again reported as a 'special issue'. Key findings (Green and Raphael, 2002, 121) were that:

- numerous sectoral EAs had been carried out in the Bank's regions;
- experience with regional EA remains limited, although certain approaches have similar characteristics (e.g. coastal zone and watershed management frameworks); and
- other SEA-type processes form part of new lending instruments, "most of which did not exist at the time the second EA report was prepared".

The Bank's has decided to gradually broaden the use of SEA across a variety of sectors and operations. Its new Environment Strategy identifies SEA as a key implementation tool (World Bank 2002). As part of the preparatory process, the Bank commissioned a report on the international state-of-the-art in using SEA as a tool for developmental planning, policy-making and decision-making (Kjørven and Lindhjem 2002). The report reviews bank experience of using SEA, presents eight case studies and discusses available options for mainstreaming SEAs. In 2002, the Bank also launched a three-year structured learning programme on SEA which focuses on the application of SEA approaches to Bank and client operations, on the relationship with other Bank instruments, and on ways in which use of SEA can add value to the outcomes. As part of the programme, a dedicated part of the Bank's website (www.worldbank.org/environment - click on analytical and advisory assistance) provides a wealth of material on the broad use and definition of SEA.

Also of interest is a report (funded by the aid agencies of Canada and the Netherlands) presented to the Working Party on Development Assistance and Environment of the OECD Development Assistance Committee (DAC). This reviews SEA provision and practice in development cooperation agencies in the mid 1990s (OECD/DAC, 1997) (see Box 4.12). It provides a benchmark against which recent developments in that area (see Chapter 4) can be reviewed.

There is increasing interest in SEA is developing countries, but domestic applications are still at an embryonic stage. A notable exception is South Africa - an atypical developing country – where SEA thinking is particularly advanced. The Council for Scientific and Industrial Research (CSIR) has taken the lead on methodology development and testing an approach geared to national needs (see section 6.1.1). Principles for SEA have also been developed in South Africa and have been adopted, with minor modification, by the Canadian International Development Agency (Appendix 6). An SEA Primer (CSIR 1996) and Draft Protocol (CSIR 1997a) identify the need for, and necessary components of, an agreed approach to SEA in South Africa. However, they have not been sanctioned by, and are not promoted by, government which is still considering its approach to SEA.

3

2.2 Terms and definitions

The term SEA reportedly was first used in a draft report to the Commission of the European Communities (Wood and Djeddour, 1989[4]). It is widely used by the impact assessment community, but there are numerous related terms and institutionalised labels, especially for what we call para SEA processes in this report (see Figure 1.1). In addition, SEA is not necessarily an official title in many countries, particularly those with EIA systems that apply to policies, plans or programmes, or in the so-called European SEA Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment). The separate designation of SEA at the level of policies, plans and programmes reflects the limited coverage of EIA in the first two decades of its implementation (see section 2.1).

Initial understanding of the concept of SEA was based firmly on EIA principles and process, although it was recognised that procedure and methodology would need to be adapted. Subsequently, the range of interpretations of SEA has grown much wider and, arguably, now extends beyond its EIA foundations. As Bina (2003, ch 2) notes, this "diversity in SEA practice (approaches and tools) indicates a rebellion against the straightjacket of being conceptualised as a narrow impact assessment instrument". The growing diversity reflects the range of types and contexts covered by policy, plan and programme decision-making. There is continuing discussion of what is strategic in SEA, particularly as a general designation for all types of decisions above and prior to the project level.

In general, SEA is currently understood to be a process for identifying and addressing the environmental (and also, increasingly, the associated social and economic) dimensions, effects and consequences of policies, plans and programmes (PPPs) and other high-level initiatives. This approach should take place before decisions are made, when major alternatives are open. Preferably it should make a contribution to their formulation and development rather than focusing only on the impact(s) of their implementation. SEA is a relatively new and a rapidly evolving approach (Dalal-Clayton and Sadler 1998b) and is consensus or international agreement yet on its boundaries or precise characteristics.

Various definitions of SEA have been proposed as practitioners and academics have staked claims in this new territory. Amongst them, several are widely quoted in the literature or deserve attention because of their institutional weight (Box 2.1). These definitions also illustrate how interpretation of the concept of SEA is evolving. Early definitions saw SEA as a tool derived, extending its process and procedure upstream from the project to the strategic level, and focusing on the environmental impacts of policies, plans and programmes that are already proposed. More recent definitions – and the international trend - take a broader, more complex and varied perspective. They see SEA as including the social (and sometimes the economic) dimension. They also promote SEA not just as a means to 'upstream' impact assessment, but as a diagnostic tool to help integrate environmental and social (and even economic) considerations during the formulation of policies and development plans and programmes[5]. In other words, SEA is seen as a key tool for sustainable development. Following a similar line of analysis, Bina (2003) notes three main trends in the evolution of SEA conceptions (Box 2.2).

[4] The final report was submitted to the CEC in 1990 and formed the basis of a published conference paper (Wood and Djeddour 1990) which itself was reworked as a journal paper (Wood and Djeddour 1992).
[5] Kirkpatrick and Lee (1997) examine the different ways in which such integration might be achieved in practice in the development planning process, using a variety of country case studies.

Box 2.1: Some Definitions of SEA

SEA is a systematic process for evaluating the environmental consequences of proposed policy, plan or programme initiatives in order to ensure they are fully included and appropriately addressed at the earliest appropriate stage of decision-making on par with economic and social considerations.

Sadler & Verheem (1996. p27)

The formalised, systematic and comprehensive process of evaluating the environmental effects of a policy, plan or programme and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.

Therivel *et al*. (1992), and Therivel & Partidario (1996)

SEA is a process directed at providing the authority responsible for policy development (the 'proponent') (during policy formulation) and the decision-maker (at the point of policy approval) with a holistic understanding of the environmental and social implications of the policy proposal, expanding the focus well beyond the issues that were the original driving force for new policy.

Brown and Therivel (2000, p84)

and more recently (although not strictly a definition), after reviewing international experience and its own practice in SEA, the World Bank assigns the following purpose to SEA:

A participatory approach for upstreaming environmental and social issues to influence development planning, decision- making and implementation processes at the strategic level".

Mercier (2004)

Box 2.2: Trends in the evolution of SEA conceptions

Bina (2003) observes three key trends in the development of SEA:

- the shift away from the traditional 'object' of assessment (draft PPPs) towards a more encompassing view of the policy process and its political dimension, with special attention to decision-making;
- the growing focus on the promotion of sustainable development, with the implicit need to combine hard and soft sciences, and develop dialogical assessment processes; and
- the reduced emphasis on the positivist dimension of the assessment of impacts within the overall SEA process, accompanied by an increased attention to SEA's contribution to, and integration in, the 'formulation' process of strategic initiatives.

Policy-makers have reservations about the value added by SEA. So it is necessary to be able to say clearly what it is and what it is useful for. At present there is anything but clarity. Instead , there is an expanding plethora of different acronyms, descriptions and interpretations of SEA and SEA-type approaches in use internationally (see Box 2.3). This reflects the fact that SEA is seen as a means to an end, a multi-lane route to addressing the environment and promoting sustainable development.

Box 2.3: Examples of commonly used acronyms for SEA-type approaches

ANSEA ***Analytical strategic environmental assessment*:** an analytical framework for evaluating decision-making processes – developed by a consortium of European institutions to assist in implementing the European Directive on SEA (see Appendix 13).

CEA ***Country environmental analysis*:** recently introduced by the World Bank to evaluate systematically the environmental priorities of development in client countries, the environmental implications of key policies, and countries' capacity to address their priorities.

EER ***Energy and environment reviews*** - used by the World Bank for upstream analytical work on environmental issues related to the energy sector.

IA ***Integrated assessment*:** a term usually used for a structured process to assess complex issues and provide integrated insights to decision-makers early in decision-making processes.

IEM ***Integrated environmental management*:** an approach developed in South Africa as a code of practice to ensure that environmental considerations are fully integrated into all stages of the development process in order to achieve a desirable balance between conservation and development.

ITA ***Integrated trade assessment*:** an approach used by UNEP to assess the economic, environmental and social impacts of trade measures and the links between them.

PA ***Policy appraisal*:** the assessment of the impacts of policies (sometimes focused on just the environmental dimensions, but increasingly also on social and economic issues).

PIA ***Poverty impact assessment***

PSIA ***Poverty and social impact analysis:*** an approach developed by the World Bank to provide improved analysis to support PRSP and other processes. It draws from a menu of economic and social tools and quantitative and qualitative techniques. PSIA is used to mean analysis of the distributional impact of policy reforms on the well-being or welfare of different stakeholder groups, with particular focus on the poor and vulnerable.

REA ***Regional environmental assessment*:** a form of EA that adopts a spatial or area-wide approach to development planning.

SA ***Sustainability appraisal*:** a generic term for assessment approaches based on the broad integration of environmental, social and economic dimensions of policies, plans and programmes.

SEA ***Strategic environmental assessment***: an umbrella term for the assessment of the environmental (and increasingly also the social and economic) impacts/dimensions of policies, plans and programmes;

Strategic effects assessment – used in The Netherlands to embrace broad effects and avoid undue emphasis on just environmental impacts;

Sectoral environmental assessment: a form of EA that addresses sector-wide issues.

SEAN ***Strategic environmental analysis***: a tool developed by AIDEnvironment and SNV (Netherlands Development Organisation) to enable environmental issues and options to be

	fully integrated into policy, plan and programme design and priority setting – follows a 10 step participatory approach.
SEF	***Strategic environmental framework*:** an approach developed for the Asian Development Bank to guide decision-making in certain sectors in the Greater Mekong Subregion – uses a combination of analytical, participatory and policy processes and assessment methodologies.
SIA	***Strategic impact assessment*** – used by some instead of SEA to denote an approach which includes not just environmental but also social and economic dimensions. Also an acronym for ***sustainability impact assessment*** (the same as SA) and ***social impact assessment.***
SO	***Strategic overview***: a question-based approach developed by UNDP to help the design of aid programmes, focusing on baselines conditions, impacts and opportunities.

As in other areas of endeavour, there is sometimes a tendency for the owners or champions of particular branded approaches to promote those approaches exclusively. Sometimes they ignore, dismiss or even discredit other approaches (particularly when territorial turf or influence is perceived to be threatened). Where this happens, it restricts progress and experience gained through different approaches. Learning (eg what approaches or methods work well or less well) is not shared or absorbed, and general practice does not advance.

A number of reports have noted that "lack of knowledge and standardised terminology, both as regards SEA and PPPs, often confuses discussion on the issue" (Environment Australia, 1997). David Hanrahan (2003) of the World Bank has aptly summarised the situation: "the terminology of SEA is like a menagerie – numerous creatures of varying interest and relevance to different partners" (Figure 2.1). Some of these are integrated within particular policy and planning instruments, eg the World Bank's country assistance strategies (CAS) and structural adjustment loans (SAL). Others are applied separately, either covering environmental considerations only or sometimes including social or economic factors as well.

In this review, we do not offer a competing definition. Rather, our aim is to provide a review of experience and actual practice. We hope this might facilitate international debate and lead to further international clarification and agreement on the scope and limits of SEA, or perhaps of particular types of SEA.

Any broad definition of the current and growing 'family' of SEA approaches will need to remain generic and flexible. For the purposes of this review, we have interpreted SEA in this way. But to understand evolving experience and practice, we have found it useful to distinguish three broad categories:

- ***formal SEA procedures*** as prescribed in international or supra-national instruments (notably the SEA Protocol to Convention on EIA in a Transboundary Context (1991) and the European Directive on SEA (2001/EC/ 00)), or under legal and policy frameworks established by certain countries and international organisations, such as the World Bank.;

- other ***near-equivalent processes*** of environmental appraisal of policies and laws;

- a broader range of SEA-type processes, methods and applications which we refer to as *'**para-SEA**'* - a shorthand term for approaches that do not meet formal specifications or strict

definitions of SEA but have some of their characteristics or elements and the same overall purpose. This involves the assessment of environmental concerns (sometimes together with social and economic issues) to enable these issues to be taken into account in decision-making and in the preparation and implementation of policies, plans and programmes.

Figure 2.1: The menagerie of SEA terminology
(Source: adapted from Box 2.3 by Jon Hobbs, DFID)

2.3 SEA principles

A significant increase in the use of SEA might follow if progress can be reached in three areas: reaching consensus on its scope and aims; agreeing guiding principles on SEA for potential users; and developing a typology of the different forms that SEA can takes (we make a preliminary attempt in Figure 1.1). Kjørven and Lindhjem (2002, p9) observe that this would "allow for variety in implementation forms, depending on the context". A first approximation to SEA principles is offered by Sadler and Verheem (1996) and Dalal-Clayton and Sadler (1998) (Box 2.4). Performance criteria for SEA have also been developed by the International Association for Impact Assessment (2001, see Box 2.5). The latter elaborate on the principles but concentrate primarily on procedural aspects of an effective or good quality SEA.

For many developing countries, reference may be made to the SEA principles and guidelines prepared for South Africa (see section 6.1.1). Here, the priorities are sustainable land development and meeting basic needs of the majority of the population that lives at or near the

Box 2.4: Some Principles for SEA

(A) General: An SEA process should:

- fit the purpose and be customised for application at the policy level or at the level of plans and programmes;
- have integrity, so that it is applied in accordance with the objectives and provisions established for it; and be effective in meeting those objectives;
- be focused on delivering information necessary to the decisions to be made, and address the significant and key issues;
- be driven by sustainable development principles (taking into account environmental, social and economic considerations); and therefore
- be integrated with parallel analyses of economic and social dimensions and issues, and with other planning and assessment instruments and processes;
- relate to project EIA where appropriate – perhaps through tiering mechanisms;
- be transparent and open;
- be practical, easy to implement, oriented to problem-solving, and cost-effective;
- introduce new perspectives and creativity (it should "provide bonuses, not be a burden"); and
- be a learning process (thus it is essential to start 'doing SEA' to gain experience).

(B) SEA Steps: An SEA process should ensure that:

- *screening*: responsible agencies carry out an appropriate assessment of all strategic decisions with significant environmental consequences;
- *timing*: results of the assessment are available sufficiently early for use in the preparation of the strategic decision;
- *environmental scoping*: all relevant information is provided to judge whether: (i) an initiative should proceed; and (ii) objectives could be achieved in a more environmentally friendly way (i.e. through alternative initiatives or approaches);
- *other factors*: sufficient information is available on other factors, including socio-economic considerations, either parallel to or integrated in the assessment;
- *review*: the quality of the process and information is safeguarded by an effective review mechanism;
- *participation*: sufficient information on the views of all legitimate stakeholders (including the public affected) is available early enough to be used effectively in the preparation of the strategic decision;
- *documentation*: results are identifiable, understandable and available to all parties affected by the decision;
- *decision-making and accountability*: it is clear to all stakeholders and all parties affected how the results were taken into account in decision-making; and
- *post-decision*: sufficient information on the actual impacts of implementing the decision is gained to judge whether the decision should be amended.

Source: Dalal-Clayton and Sadler (1998b), adapted from Sadler (1998b) and Tonk & Verheem (1998).

Box 2.5: Performance Criteria for SEA

A good-quality SEA process informs planners, decision-makers and affected public on the sustainability of strategic decisions, facilitates the search for the best alternative, and ensures a democratic decision-making process. This enhances the credibility of decisions and leads to more cost- and time-effective EA at the project level. For this purpose, a good-quality SEA process is:

integrated:
- ensures an appropriate environmental assessment of all strategic decisions relevant for the achievement of sustainable development;
- addresses the inter-relationships of biophysical, social and economic aspects; and
- is tiered to policies in relevant sectors and (transboundary) regions and, where appropriate, to project EIA and decision-making.

sustainability-led:
- facilitates identification of development options and alternative proposals that are more sustainable[1].

focused:
- Provides sufficient, reliable and usable information for development planning and decision-making;
- Concentrates on key issues of sustainable development;
- Is customised to the characteristics of the decision-making process; and
- Is cost- and time-effective.

accountable:
- is the responsibility of the leading agencies for the strategic decision to be taken;
- is carried out with professionalism, rigor, fairness, impartiality and balance;
- is subject to independent checks and verification; and
- documents and justifies how sustainability issues were taken into account in decision-making.

participative:
- informs and involves interested and affected public and government bodies throughout the decision making process;
- explicitly addresses their inputs and concerns in documentation and decision-making; and
- has clear, easily-understood information requirement and ensures sufficient access to all relevant information.

Is iterative:
- Ensures availability of the assessment results early enough to influence the decision-making process and inspire future planning;
- Provides sufficient information on the actual impacts of implementing a strategic decision, to judge whether this decision should be amended and to provide a basis for future decisions.

[1]: ie that contributes to the overall sustainable development strategy as laid down in Rio 1992 and defined in the specific policies or value of a country.

Source: IAIA (2002),), criteria developed by Rob Verheem and members of the SEA section

poverty level. In the South African model, SEA is intended to be integrated flexibly within the planning processes, and applied iteratively to focus on the environmental potentials and constraints on development (DEAT 2000)[7]. This approach approximates to what is known as regional assessment in other countries. At the World Bank, such regional assessment provides a mechanism for pre-clearance of development programmes and policy options that apply to a particular area or natural unit such as a coastal zone. It provides a spatial framework for proactive environmental management. This is particularly important for 'impact zoning' to safeguard valued critical ecosystem components and to minimise impacts by setting limits on air or water pollution loads.

Thus, SEA is a decision-aiding tool rather than a decision-making process, and it needs to be flexibly applied to policy and planning cycles. Other commentators have argued that SEA needs to be more sensitive to the real characteristics of decision-making (e.g. Nilsson & Dalkmann 2001). From this perspective, SEA encompasses assessments of both broad policy initiatives and more concrete programmes and plans that have physical and spatial dimensions. It can also be applied throughout the process to shape options and to assess the impact of implementing a preferred course of action. Bina (2003) examines the *raison d'ẽtre* of SEA and calls for its "re-conceptualisation". She proposes a framework that "emphasises the need to interpret and operationalise SEA at the level of organisations (such as ministries or multi-lateral development agencies), not of economic sectors alone … [centralising on] the interactions of the context, the nature of strategic objectives, the framing of 'environmental', the purpose of SEA, and the assessment's approach and tools".

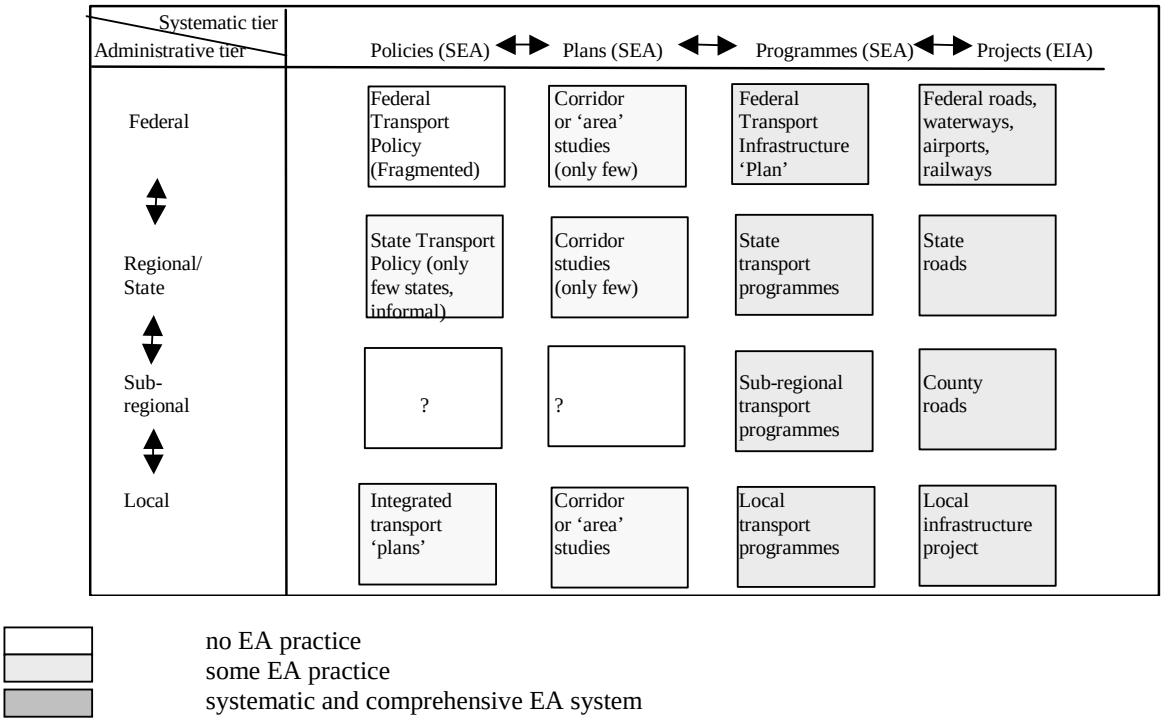
The interrelationship of policies, plans and programmes is important. It is frequently idealised as a hierarchical or tiered process of decision making (illustrated by Figure 2.2). But the reality is often quite different. This is particularly the case at the level of policy-making which does not necessarily follow a logical sequence of discrete, technical steps. Often, it is a more complex, iterative process in which the range of choice is gradually narrowed and most options are foreclosed by the project phase. This fact has a critical bearing on practical applications of SEA (Sadler 1997).

In addition, terms such as *policies, plans and programmes* (PPP: the 3 P's) mean different things in different countries and their use is dependent on the political and institutional context. In this book, we use these terms in a generic sense. Policies are taken to be broad statements of intent that reflect and focus the political agenda of a government and initiate a decision cycle. They are given substance and effect in plans and programmes. This involves identifying options to achieve policy objectives and setting out how, when and where specific actions will be carried out (Sadler and Verheem, 1996).

However defined, policies and programmes encompass a range of strategic proposals, all of which are likely to have environmental, social or economic consequences. Sadler and Verheem (1996) propose a "pre-screening" check for SEA to establish the proposals that raise environmental concerns (Box 2.6). This procedure is simple and straightforward and therefore

[6] In practice, the Department of Environment and Tourism (DEAT) has not actively promoted the SEA guidelines and most of the 50+ SEAs conducted to date in South Africa have followed different approaches, each shaped by local decision-making and planning contexts (Nigel Rossouw, pers.com.).
[7] In practice, the Department of Environment and Tourism (DEAT) has not actively promoted the SEA guidelines and most of the 50+ SEAs conducted to date in South Africa have followed different approaches, each shaped by local decision-making and planning contexts (Nigel Rossouw, pers.com.).

Figure 2.2: EA practice within the tiered transport planning system in Germany
(Source: Thomas Fischer, pers.com)



no EA practice
some EA practice
systematic and comprehensive EA system

Box 2.6: A Pre-Screening Procedure for Determining SEA Requirements

The following questions can be used to make a quick judgement about SEA requirements:

What is the actual content of the proposal?
- is it concerned only or primarily with broad general direction(s) ?; or
- does it address or specifically include operational measures (projects, activities, etc.)?

What policy area or sector is targeted in the proposal?
- is it one known to have or likely to cause environmental effects (e.g. energy, transportation, housing, agriculture)?; and/or
- are there components which are likely to have cumulative or long-term consequences for the environment (e.g. trade, industrial diversification, technology development)?

What environmental considerations are raised by the proposal? Does it appear likely to:
- initiate actions that will have direct or evident environmental impacts?;
- raise broad environmental implications and/or issues that should be addressed ?; or
- have marginal or no environmental consequences?

Source: Sadler & Verheem (1996).

can be adapted to different decision-making contexts, including those in developing countries. It is undertaken by reference to:

- the policy area or sector covered - in general, all policy areas which concern or lead to changes in the use of land and natural resources, the production of raw materials, chemicals and other hazardous products and/or the generation of pollutants, wastes and residuals, are potential candidates for SEA;

- the type of environmental effects that can be anticipated - typically, when moving from the policy to the project stage of the decision cycle, environmental considerations correspondingly shift from indirect to direct effects (although this rule of thumb does not always apply).

Logically, the scope and form of SEA should correspond broadly with the level of generality of decision-making and the type of environmental effects that are identified (see Box 2.5). Typically, direct effects can be correlated with projects and with plans and programmes that initiate and locate specific activities. Indirect effects are associated more with policies, strategies and legislation - particularly those that are not easily separable into discrete actions but have an environmental dimension, for example, by influencing attitudes and consumer behaviour toward transport or waste recycling (Sadler and Verheem, 1996). .

2.4 Rationale, benefits, capacity requirements and preconditions for SEA

From an 'environmental quality' or sustainabiity perspective, there is a range of benefits of introducing SEA. It can and should (Dalal-Clayton & Sadler, 1995; and Sadler and Baxter, 1997):

- promote integrated environment and development decision-making (ie promote sustainability in decision-making);

- facilitate the design of environmentally-sustainable policies and plans;

- provide for consideration of a larger range of alternatives than is normally possible in project EA;

- take account, where possible, of cumulative effects (particularly by focusing on the consequences of sectoral or regional-level developments) and global change;

- enhance institutional efficiency (particularly where EIA related skills, operational funds and institutional capacities are limited) by obviating the need for un-necessary project-level EIAs;

- increase the influence of certain ministries and increase coordination across sectors;

- strengthen and streamline project EA by:
  - the incorporation of environmental goals and principles into policies, plans and programmes that shape individual projects;
  - prior identification of impacts and information requirements;
  - clearance of strategic issues and information requirements; and
  - reducing time and effort taken to conduct reviews; and

- provide a mechanism for public engagement in discussions relevant to sustainability at a strategic level.

Politicians might see the benefits more in terms of (Rob Verheem, pers.com.):

- more credibility in the eyes of their voters, leading to better commitment to their plans and policies, thus leading to easier implementation;
- better policies and plans – because, if better alternatives exist, SEA helps in finding them; and
- less costly mistakes - because of a better insight to the accumulated impact of a large number of smaller projects or potential conflicts between agencies.

These benefits apply to developing countries as well as industrial countries. But for SEA to function effectively, a certain level of institutional maturity is necessary. At a minimum, this should allow for environmental considerations to be taken into account and to influence decision-making. Appropriate skills are needed for this purpose, notably within government departments and agencies, in the private sector (e.g. industry, environmental consulting companies) and amongst academics and NGOs. Where these are not in place, adequate capacity will need to be developed.

In broad terms, the rationale for SEA of policies, plans and programmes falls into three main categories: strengthening project EIA; addressing cumulative and large-scale effects; and advancing the sustainability agenda.

Strengthening project EIA

EIA practice is constrained by certain limitations and weaknesses. These include structural weaknesses centred on the relatively late stage at which EIA is usually applied in decision-making. By this point, high-level questions about whether, where and what type of development should take place have been decided, often with little or no environmental analysis. Project-by-project EIA is also an ineffective means of examining these issues. It is far more preferable to use SEA or an equivalent approach to incorporate environmental considerations and alternatives directly into policy, plan and programme design. This can also help to focus and streamline project EIAs, making them more consequential and reducing the time and effort involved in their preparation. For developing countries, SEA may yield significant other benefits. For example, it can rule out certain kinds of development at the policy level and reduce the need for many project-level EIAs. This, in turn, can relieve pressure where institutional and/or skills capacity is limited.

Addressing cumulative and large scale effects

Recently, considerable efforts have been made to extend EIA-based frameworks to encompass certain types of cumulative effects. These deal reasonably well with the ancillary impacts of large-scale projects (e.g. dams, transport infrastructure) and the incremental effects of numerous, small-scale actions of a similar type (e.g. road realignment and improvement). However, more pervasive cumulative effects and large-scale environmental change (the end result of multiple actions and stresses that cut across policy and ecological boundaries) can be addressed best by SEA of policies, plans and programmes. World Bank sector and regional assessments, widely applied in developing countries already, are described in Chapter 4.

Advancing the sustainability agenda

When applied systematically, SEA can become a vector for moving from traditional to sustainability-based planning and decision-making, as called for by the Brundtland Commission (WCED 1987) and Agenda 21 (UNCED 1992). Conventionally, the emphasis has been on tackling the environmental symptoms or effects of development in the "downstream" part of the decision cycle. In contrast, the sustainability approach focuses on the sources or causes of environmental deterioration. These lie in the "upstream" part of the decision cycle, in the economic, fiscal and trade policies that guide the overall course of development. SEA provides a means for incorporating environmental objectives and considerations in economic decisions[8]. This approach is fully consistent with the perspective of developing countries, e.g. as expressed at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro and the WSSD *Plan of Implementation* agreed at Johannesburg (2002).

In practice, the extent to which the benefits of SEA are achieved will depend on a number of factors. Based on recent experience, the following appear to be particularly important (Sadler 1997):

- the provisions made for SEA should be clear and transparent, whether based on a legal versus framework;
- the prior record of implementation and acceptance by decision-makers;
- the degree to which overall strategies of sustainable development are in place; and
- the scope and level(s) of application - the broadest range of benefits are gained from SEA systems that include review of policies as well as plans and programmes.

General benefits of SEA

There is a burgeoning interest in SEA, not least from developing countries. This is because it meets the need for more integrated and balanced decision-making, and because of its potential to relieve the burden of assessment at the project level This demand cannot be ignored and is likely to continue to grow. SEA enables decision-makers to develop policies and strategies that are based on a sound analysis and understanding of their sustainability implications. It is proactive, enabling decision-makers to avoid the costs and missed opportunities that, all too often, are associated with inadequate information and limited choices. When applied as a flexible, consultative, transparent and iterative process, SEA helps to identify best practicable options for achieving positive outcomes and minimizing adverse effects in accordance with sustainability principles.

SEA should be applied at the highest level possible in planning or decision-making, eg to development policies, plans and strategies. In this way it can focus on the 'source' of environmental impacts rather addressing their symptoms later on. The results of the SEA can then cascade down the decision-making hierarchy and streamline subsequent, lower-level decisions. In this way, SEA can overcome a major limitation of project level EIA - it operates only at the lower (downstream) end of the decision-making process.

When used systematically at a high level, SEA facilitates early integration of environmental, social and economic (ESE) concerns. It can also identify specific measures to mitigate any potentially adverse effects of implementing PPPs and can establish a framework for subsequent project-level EIA. In the context of development cooperation, such a framework can include

[8] Indeed, SEA is now being seen by some donors as an important tool to help frame the way that direct budgetary support is provided/targeted (an increasing trend in development cooperation).

requirements for institution strengthening and capacity-building related to environmental management.

The World Summit on Sustainable Development (WSSD) in Johannesburg highlighted that many of the pressing challenges of sustainable development are interrelated, and that ESE aspects need to be addressed together at global, national and local levels. SEA can be used, with other tools, to establish a coherent policy response to the WSSD agenda. But the approach may differ depending on country and insititutional contexts. Integrated assessment could be undertaken within an SEA, or SEA could provide the environmental contribution to integrated decision-making.

Considerable experience has been gained in applying SEA to development proposals in major sectors, such as energy and transportation, and as part of regional and land use plans. In addition, SEA has been extended to address a range of international development and trade initiatives. For example, at the World Bank, SEA is part of the Environment Strategy for 'mainstreaming' (integrating environment across sectors) and 'upstreaming' (focusing on policy).

Other policy and institutional benefits can also be realized through the use of SEA. These include long-term changes in the culture of decision-making. Examples include those changes arising when environmental values become part of the mandates and actions of sector agencies, or when public participation in SEA fosters greater openness, transparency and accountability. SEA also helps to *strengthen and streamline project EIA*, particularly when the results of the one approach can be tiered to the conduct of the other. There are opportunities for time- and cost-saving, particularly when SEAs of policies and plans initiate or set a framework for specific projects that are subject to EIA.

Some examples of SEA benefits in developing and transitional countries

A briefing paper prepared by UNDP and the Regional Environment Centre for East and Central Europe (REC) for the 5th Pan-European Ministerial Conference, 'Environment for Europe" (Kiev, May 2003) discusses the role and practice of SEA in countries in transition (Dusik *et al*., 2003). It is based on recent experience and identifies the numerous benefits that have been or can be gained from application of SEA in Eastern Europe, Caucasus and Central Asia. SEA leads to better environmental protection and management and promotes sustainable development. It also strengthens policy-, plan- and programme-making processes, thereby providing a number of immediate and longer term benefits for development agencies, planning authorities and governments. SEA improves the efficiency of planning processes and governance. Further explanation and examples of these benefits are given in Box 2.7.

In developing countries, SEA can make a critical contribution to improved transparency in decision-making, co-ordination among agencies and, over the longer term, good governance. For example, in a study of the potential of SEA in Nepal, ERM (2000) note:

> "Implementation of SEA at local government levels would also require the support of the Ministry for Local Development (MLD). The profile of both MLD and the Ministry of Population and Environment (MoPE) is currently rather weak. MoPE's role, for example, is perceived as being more reactive than proactive. This perception could be a risk to the effectiveness of SEA. However, SEA could provide an opportunity for MoPE and MLD to increase their 'visibility' in more strategic, proactive planning and decision-making. For MoPE, this could enhance the image of environmental protection and management and its own proactive influence on sector ministries. For MLD, the introduction of SEA at local planning levels could enable it to increase coordination with other sector ministries, thereby enhancing its profile and status"

Box 2.7: Benefits of SEA in Transitional Countries

A UNDP/REC workshop on SEA of Regional Development Plans in Central and Eastern Europe (December 2001, Slovenia) and other studies were carried out as part of the Sofia Initiative on SEA. These showed that SEA can help decision makers to:

- achieve environmentally sound and sustainable development;
- strengthen policy, plan and programme making processes;
- save time and money by avoiding costly mistakes; and
- improve good governance and build public trust and confidence in decision-making.

Achieving environmentally sound and sustainable development

The use of SEA enables the different objectives pursued by various administrative levels and sectors to be reconciled. In CEE, SEA has supported evaluation of the full range of options and alternatives against these overall objectives. This has helped the design of environmentally sustainable implementation plans for preferred strategic options. For example:

> *"The SEA for the first National Development Plan of Poland provided us with useful recommendations for improved consideration of environmental issues. The SEA has a wider applicability and can also be used in elaboration of other documents. We will be able to use the lessons learned and methodology developed in the future"*
>
> (Piotr Zuber, Ministry of Economy, Labour and Social Policy, Poland)

Strengthening policy, plan and programme making processes

SEA also helps to reconcile different goals and objectives. In this way it supports a gradual shift of decision-making towards a focus on genuine sustainable development. Moreover, SEA assists in the co-ordination between environmental authorities and proponents of policies, plans and programmes. It helps to streamline decision-making systems by reducing the complexity of environmental issues at the different stages of planning hierarchies. For example:

> *"SEA helped us to improve the quality of the Hungarian Regional Operational Programme. Proponents of this programme often did not take into account natural resources, which form the basis of any economic activity. The SEA team identified the main relevant environmental issues and helped us to consider this information throughout the entire planning process. SEA also facilitated our cooperation with the Ministry of Environment, other sectoral ministries and regional authorities during environmental optimising of the programme"*
>
> (Ms. Ágnes Somfai, Prime Minister´s Office, Hungary)

Saving time and money

SEA gives an early warning of unsustainable or environmentally damaging options. So it saves time and money as problematic options are disregarded before resources are spent on their development and costly mitigation or remediation measures are avoided. SEA also enables planners to effectively gather and analyse input from relevant stakeholders. Ultimately, this makes decision-making more effective and less time consuming. For example:

> *"Thorough application of SEA will help us in avoiding large-scale health problems that occur when environmentally problematic strategic decisions are made"*
>
> (Ms. Mojca Gruntar-Cinc, Ministry of Health, Slovenia)

Improving good governance and public trust in decision-making

SEA increases the overall transparency of strategic decision-making, helping to create public trust in the process. By allowing decision-makers to consider opinions of key stakeholders early in the planning process, SEA reduces the risk of deadlock during decision-making. And it may help to mobilise the support of key stakeholders for policy and plan implementation. For example:

> *"SEA was very useful in elaboration of the Czech National Development Plan. It had benefits that went beyond its original purpose of ensuring full consideration of sustainable development during the planning process. SEA helped us to improve openness of the entire programming process and established a "bridge" between the planning team and the public. This turned out to be very positive feature that we later very much appreciated"*
>
> (Mr. Tomas Nejdl, Ministry of Regional Development, Czech Republic)

Source: UNDP/REC (2003), prepared by Jiri Dusik, Thomas Fischer and Barry Sadler, with inputs from Andrej Steiner (UNDP) and Nick Bonvoisin (UNECE)

But to have such an effect, it is important that SEA is not promoted as an environmentalists' 'toy' and that ownership remains with the lead authority, with the weaker agencies in a strong consultation role.

2.5 Opportunities and constraints

In the wake of WSSD, there are many opportunities for introducing and mainstreaming SEA in domestic policy-making, decision-making and planning systems, as well as in development assistance and the work of lending and donor agencies. The policy and institutional benefits have already been described. They apply particularly to strengthening environment ministries. These are often are weak in developing countries. However, there is a larger task outstanding. Many of those who must implement and use the results of SEA still remain to be convinced of its value. Some people have pointed to the challenges of using SEA, particularly in situations where issues and priorities are constantly changing, or where it has exacerbated inter-institutional conflicts, eg between water utility and environmental protection agencies (Sanchez-Triana and Quintero, 2003). As a next step, these benefits need to be better communicated to development agencies and policy-makers and their advisors in developing and transitional countries. A good example is the statement on SEA prepared by UNDP and the Regional Environmental Centre for Central and Eastern Europe for the Kiev Ministerial Conference (UNDP/REC 2003).

SEA offers good opportunities to integrate social, economic and environmental considerations in decision-making and to make the latter more transparent, accountable and effective (see Table 2.1). For developing countries, the introduction and implementation of SEA supports 'good governance', gives visibility to more strategic, proactive planning and decision-making and demonstrates commitment to environmentally sustainable development. For environment ministries, this can enhance their role and proactive influence on sector ministries responsible for development and poverty reduction. For development ministries, the introduction of SEA at all levels can increase inter-sector coordination and policy and planning integration. This will be particularly important in the design and implementation of poverty reduction strategies that simultaneously aim to improve health, build infrastructure and provide food security.

Table 2.1: SEA: constraints and opportunities to overcome them

CONSTRAINTS	OPPORTUNITIES
• Little interest by many government agencies in subjecting policy and planning proposals to assessment, reinforced by fear of losing control, power and influence by opening up such processes.	• SEA is a transparent, participatory process that helps to realise good governance; it promotes inter-institutional relations in order to define priorities; and it supports informed, balanced decision-making, reinforces accountability and builds public trust and confidence.
• Limited appreciation of the potential utility of upstream assessment among senior staff (in both governments and donor agencies), and doubts about the robustness of results.	• The efforts of DAC and others to clarify the role and utility of SEA should improve understanding of how, when and where SEA can help senior staff achieve their responsibilities.
• Lack of resources for perceived 'non-essential' studies at early stages in the preparation of assistance programmes.	• Investment up-front in an SEA can save time and the later expense of fixing the consequences of poor decisions.
• Perception that SEA will add significant costs and increase the work load of hard-pressed agencies.	• It is likely that SEA costs will decrease over time as it is institutionalised (just as EIA costs reduced as it became routine).
• Concern that SEA will increase the time frame for decision-making or delay development.	• When applied appropriately and early, the SEA process is integrated within the decision-making process.
• Absence of clear guidance and known, tried-and-tested methods.	• SEA principles, methods and guidance are in use internationally and can be drawn upon.
• Unclear lines of accountability and responsibility for undertaking SEA.	• International legal instruments for SEA and practical experience with how to operate national systems can be built on.
• Lack of practitioners with expertise in SEA approaches in both donor agencies and in recipient countries.	• Investment in SEA awareness-raising and training can build skills and competencies.
• Need to train and take on additional staff for this purpose.	• Training can pay major dividends by improving decision-making, eliminating wasted time spent on fixing later problems and promoting more sustainable development.

In capitalising on these opportunities, a number of constraints also need to be addressed. Some of these are listed in Table 2.1. The capacity of developing and transitional countries to introduce and implement SEA varies. In many cases, it will require assistance with policy, legal and institutional reforms to establish the basic preconditions. Even if SEA arrangements are in place or pending, it will be necessary to raise awareness and train practitioners. In China, the new EIA law requires SEA of plans and programmes. The potential needs and demands for training are

hudge. It is estimated that 100,000 trained SEA practitioners will be needed for the new law to become fully operational.

2.6 Evolution and trends in SEA

The evolution of SEA can be considered from two broad perspectives In one, the impetus has come from policy analysis and planning and increasingly is driven by sustainable development concerns. The other approach has been driven by concern about the limitations and narrow, project-specific focus of EIA and the lack of coverage of higher level decisions (which set the context and framework for project EIA). However, these lines of approach are overlapping as well as convergent. For example, both emphasise the importance of addressing environmental concerns and sustainability as substantive aims. Both seek to achieve their integration into the mainstream of policy and plan-making through systematic analysis and transparent, open procedures. This emphasis on mainstreaming may also be seen as a third, mid-level approach through which SEA has evolved (Sadler, 2001).

2.6.1 SEA in the context of EIA history

The history of SEA is best recounted in relation to the mainstream of EIA history, dating from the founding US National Environmental Policy Act (NEPA, 1969). Section 102 of NEPA contains the procedural requirements, including the provision for a detailed statement to accompany "proposals for *legislation and other major federal actions* significantly affecting the…environment" (emphasis added). One of the architects of NEPA has stated that this provision was to be an action-forcing measure, intended to reform and redirect federal policy-making (Caldwell, 1998). In practice, however, policy and other strategic decisions were excluded from review, other than for programmatic activities that could be grouped together (as specified in NEPA *Regulations*).

From this standpoint, SEA can be seen as a second-generation process - one that moves EIA principles 'upstream' in the decision-making process. Although still at a relatively early stage, the evolution and take up of SEA has been rapid in the past few years and further changes are pending (see Appendix 1). In broad outline, the evolution of SEA can be divided into three main phases (Sadler 2001):
`

- the *formative stage* (1970-1989) when the legal and policy precedents for SEA were laid down but had limited application (largely in the USA);

- the *formalisation stage* (1990-2001) when different provision and forms of SEA were instituted by a number of countries and international agencies; and

- the *expansion stage* (2001 onward) when international legal and policy developments promise to catalyse wider adoption and use of SEA, particularly in Europe but also elsewhere.

2.6.2 The status of SEA systems

Currently, SEA systems are in place in more than 25 countries and jurisdictions[9]. With certain exceptions, these are member states of the UNECE region, which includes Europe and North America. However, an increasing number of developing countries are gaining experience of SEA as a result of regional and sectoral EA procedures established by the World Bank. These processes operate under different arrangements. Their scope of application, collectively, encompasses policy, legislation, plans, programmes and other strategies across a range of different sectors. So far, however, few, if any, countries have SEA systems that are comprehensive in their coverage (i.e., they apply to all strategic proposals with potentially important environmental effects), and not all of them apply to the highest levels of decision-making, typically defined by policy or legislation. The application of SEA to plans and programmes is more common place, with a particular focus on the energy, transport, waste and water sectors and on spatial or land use plans.

The legal and institutional bases of SEA systems also vary. This reflects differences in procedures when SEA is applied to policies compared to plans and programmes. Some countries make statutory provision for SEA under EIA or planning law. In these systems, EIA requirements and procedures usually are followed and apply particularly to SEA for plans and programmes. Other countries have established SEA through administrative order, Cabinet directive or policy guidelines. In these systems, SEA is applied as a separate or modified process from EIA, as in Canada, Denmark, Hong Kong, the Netherlands and the UK (which has a comparable process of policy appraisal). All these countries use a less formal, minimum procedure for SEA of policy or legal acts.

Current SEA processes vary considerably. Chapters 3 to 6 cover SEA experience in developed countries, development cooperation, countries in transition, and developing countries. They describe how SEA may be formal or informal, comprehensive or more limited in scope, and closely linked with or unrelated to other policy or planning instruments. In general, three broad approaches to SEA have been adopted to date (see Chapter 3 for further information):

- it has been introduced as a relatively separate, distinct process - typically as an extension of EIA;

- it has been established as a two tier system (e.g. in the Netherlands) with formal SEAs required for specific sectoral plans and programmes and an environmental “test” applied to legislation; or

- it has been incorporated into more integrated forms of environmental policy appraisal (e.g. in the UK) and regional and land use planning (e.g. in Sweden). Recently, there has been growing recognition of the importance of integrating EA with other policy and planning instruments.

Several countries in transition have established comparable SEA approaches, as described in Chapter 5. The Czech Republic and Slovakia, in particular, have considerable SEA experience at the level of policy, plans and programmes. To date, few developing countries have SEA

[9] Countries and provincial or state jurisdictions with legal or administrative provisions that establish a formal SEA procedure include: Australia, Bulgaria, Canada, China (national and Hong Kong SAR), Czech Republic, Denmark, Finland, the Netherlands, Norway, Poland, Slovakia, UK and USA (federal and California).

arrangements in place and many lack some of the enabling conditions for this purposes. SEA experience in the developing countries is reviewed in Chapter 6. However, there are a number of supportive trends and developments. Notably various international organisations have taken steps to promote the transition. These initiatives are summarised in Box 2.8 and analysed in Chapter 4.

Box 2.8: Some initiatives towards SEA in development cooperation

- In 1978, the US Council for Environmental Quality (CEQ) issued regulations for the National Environmental Policy Act (NEPA). These apply to USAID and specify requirements for "programmatic assessments".

- In 1989, the World Bank (WB) adopted Operational Directive (OD) 4.00. This made provision for environmental assessment, including the preparation of sectoral or regional assessments. This was updated in 1991 as OD 4.01and converted in 1999 into Operational Policy/Bank Procedure (OP/BP) 4.01, which formed part of the WB's environment and social safeguard compliance system. Recently, the Bank has introduced the discretionary use of other SEA-type processes for policy-based lending. A new OP/BP 8.60, approved in August 2004, recognises the need for "upstream analysis of social and environmental conditions and risks", and mentions SEA as one, among several, tools to carry out such an analysis (www.worldbank.org/sea).

- Article 2 (7) of the 1991 UNECE Convention on EIA in a Transboundary Context states that Parties "shall endeavour to apply the principles of EIA to policies, plans and programmes. The SEA Protocol to the Convention was finalized at the European Environment Ministers conference at Kiev (May 2003) and is now open for ratification by signatory countries (see: www.unece.org/env).

- In 1991, the OECD Development Assistance Committee (DAC) adopted a principle calling for specific arrangements for analysing and monitoring environmental impacts of programme assistance. An exploratory study of the role and scope of SEA in development assistance was carried out for the OECD DAC by the Canadian International Development Agency (OECD/DAC 1997). Currently, an OECD-DAC Environet Task Team is undertaking a programme of work on SEA (see Box 7.1).

A number of international assistance agencies of individual countries have promoted, developed or applied SEA tools or are in the process of doing so. Examples include:

- *Swedish International Development Agency* (Sida) has used SEA guidelines in the preparation of country strategies that focus on the relationship of poverty, the environment and sustainable development (Sida 2002a).

- *UK Department for International Development* (DFID) has experimented with SEA of draft transport policy in Tanzania, used various analytical tools in Uganda which correspond to para SEA, and helped the Nepal National Planning Commission to assess the feasibility of and requirements for introducing SEA.

- *Canadian International Development Agency* (CIDA) is currently preparing a handbook on SEA for use by Cabinet liaison staff, environmental specialists, programme and project analysts, and policy-makers. The draft handbook sets out principles for SEA, their implications for CIDA and the key actions that need to be taken.

Also certain UN agencies have promoted, developed or applied SEA tools. These include:

- UNDP's *environmental overview (EO)* was trialed in the mid 1990s and then proposed to be adapted as 'strategic overview'. But it is not currently practiced by UNDP (see UNDP 1992,

Brown 1997b and section 4.1.5). EO is an example of para SEA; it applies similar principles and has assisted in the design of other strategic tools including integrated programming and assessment (IPAT) and revised environmental management guidelines (EMG); and

- UNEP's reference manual on integrated assessment of trade-related policies outlines a framework, tool box and guidance for analysing the economic, environmental and social impacts of trade liberalisation and identifying measures to mitigate adverse effects and enhancing positive effects (UNEP 2002a).

2.6.3 International legal instruments

The number of countries with SEA systems is likely to increase now that EC Directive 2001/42/EC has come into force in member states and accession countries (in July 2004). It also promises to lead to a greater standardisation of approach to SEA of specified plans and programmes that set the framework for consent of projects subject to EIA. This process is modeled on the EIA Directive (97/11/EC) and applies a number of its procedural elements. These include the preparation of an environmental report, the information to be included in the statement, consideration of alternatives, arrangements for public consultation and factors to be considered in decision-making. The requirements and arrangements set out in the SEA Directive are described further in Chapter 3 (section 3.2).

The SEA Directive will have international, as well as Europe-wide ramifications. First, other transitional countries and possibly some newly independent states can be expected to introduce SEA arrangements that are aligned directly with the EU framework. Second, the provisions of the Directive have strongly influenced the SEA Protocol to the UNECE Convention on Transboundary EIA.

After a two-year negotiation, the SEA Protocol was formally adopted at Kiev, May 2003. Once ratified, the Protocol will be legally binding on signatories with regard to plans and programmes, and discretionary with regard to policy and legislation. It also places emphasis on the consideration of human health, going beyond existing arrangements in the UNECE region and internationally. The protocol was drafted with the participation of Central and Eastern European countries and many Newly Independent States, including those from Central Asia. It is reported that the protocol will be opened to signatories from outside the UNECE region, thereby influencing the development of SEA processes internationally.

2.6.4 Evolution of para SEA, including global and integrative approaches

The SEA Directive and the SEA Protocol are legal instruments that promote a standardised approach, at least at the level of plans and programmes. They are paralleled by an increasing variety of approaches and applications of SEA. This suggests that the original distinction between policies, plans and programmes was perhaps too simplistic and artificial and did not relate or correlate with real decision-making procedures. There are now examples of SEA undertaken for a wider range of needs and objectives (Bina 1999):

- to select from a large number of projects which may be linked to existing inventories or past plans or programmes which were not subject to a systematic assessment of their environmental implications;

- to assess the cumulative impacts of a plan or programme;
- to identify priority areas and types of projects for funding;
- to identify priority areas and types of projects which will require more detailed evaluation before being approved;
- to promote multi-modality in policies, plans or programmes for a sector;
- to choose between (or propose a combination of) structural and non-structural alternatives (eg new or upgraded infrastructure, demand management strategies, etc.); and
- to help define the key elements of a sustainable policy for a sector.

Looking at the big picture, a number of periodic global and continental environmental assessments have been undertaken. These have sought to provide a baseline for better decisions and policies, and which can perhaps be regarded as mega SEAs, eg:

- *Global Environmental Outlook 2000*; *Global Environmental Outlook 3* (UNEP 1999; 2002) (Box 2.9);
- *World Resources Report* (WRI/UNDP/UNEP/World Bank 2000);
- *Europe's Environment: The Third Assessment* (EEA 2003)

Box 2.9: The Global Environment Outlook project

The Global Environment Outlook (GEO) project was launched in 1995 by UNEP with two main components:

(a) A participatory and cross-sectoral global environmental assessment process, incorporating regional views and perceptions. It involves studies by a coordinated network of collaborating centres (multi-disciplinary institutes with a regional outlook that work at the interface of science and policy) around the world, and associated centres. Advice and support is provided by expert working groups on modelling, scenarios, policy and data.

GEO outputs in printed and electronic formats.

To date, three GEO reports have been published (1997, 2000 and 2003). GEO 4 is scheduled for 2007.

GEO-2 (2000) reports on a comprehensive integrated assessment of the global environment at the turn of the millennium (UNEP 1999). The report draws from a participatory process involving the work of experts from more than 100 countries. It also provides a vision for the 21st Century and documents many policy successes in the recent past. It stresses the need for more comprehensive, integrated policy-making, especially given the increasingly cross-cutting nature of environmental issues. The 2000 report offers a more forward-looking perspective, setting out a range of environmental scenarios and their possible consequences.

GEO-3 (2003) provides an overview of the main environmental developments over the past three decades, and how social, economic and other factors have contributed to the changes that have occurred.

For further information, see www.unep.org/geo

The latest addition to this family is the Millennium Ecosystem Assessment (MA) - an international, multi-agency initiative (2001-2005). It consists of a global assessment as well as assessments of conditions and change in ecosystems in individual communities, nations, and

regions. Its goal is to improve the management of the world's natural and managed ecosystems by helping to meet the needs of decision-makers and the public for peer-reviewed, policy-relevant scientific information on the condition of ecosystems, consequences of ecosystem change, and options for response (see Appendix 4 for details).

Equally, the processes in many countries to prepare state-of-the-environment reports (Box 2.10) can be considered as a form of para SEA, particularly where they are more than mere descriptions of conditions and include analysis of constraints and opportunities and influence planning and policy decisions. A recent example is a study prepared by UNEP on the environment in the Occupied Palestinian Territories. It aimed to help facilitate future negotiations and action related to environmental protection. The report (UNEP 2003) covers a number of areas identified as the most vital for the environment in the region: water quality and quantity; solid waste; waste water; hazardous waste; biodiversity; land use and land use change; and environmental administration. Similarly, the processes to prepare National Conservation Strategies and National Environmental Action Plans during the 1980s and 1990s display many characteristics of SEA where they provide analysis and seek to mainstream environmental considerations in decision-making.

Box 2.10: State of the environment reporting

State of the environment reporting (SOER) is a general term used to describe the compilation and review of data collected over a period of time, usually 2–5 years. Reports generally provide a comprehensive review of the status and trends of different natural resources and ecological processes (air, soil, water, etc.). These are often correlated in some way with pressures arising from public issues (child health, noise, employment, training, etc.) for the particular time period, and note policy responses. SOERs collate existing data from different monitoring systems and programmes. They provide analysis of this data to clarify trends in relation to some base line. GIS-generated data may be used for graphic representation.

Early SOERs in the 1970s and 1980s tended to be purely descriptive. More recently, many have had a broader sustainable development perspective, examining the relations between the environment and economic policies.

Sometimes, stakeholder institutions and the public are involved. In Lancashire County, UK, more than 70 organisations formed an "Environment Forum" to jointly collect and analyse environmental data for the "Lancashire Environmental Audit". Such network-based approaches to SOER can increase access to data and information that is not normally made public. In addition, it facilitates the interpretation of data by knowledgeable stakeholders during the process of data selection and analysis.

UNEP/GRID-Arendal, the UNEP Regional Resource Centre for Asia and the Pacific (RRC.AP), the European Environment Agency (EEA), and the World Resources Institute (WRI/IIED/IUCN 1996) maintain databases of SOERs around the world. Among the key guidance documents for SOERs are the checklists prepared by the EEA which aim to harmonise approaches to SOERs in the European Union (EEA 1998). These checklists cover 14 key environmental issues, from climate change to biodiversity, organised around four questions: What is happening? Why is it happening? Are the changes significant? How effective are the responses? UNEP/GRID-Arendal (1998) has prepared a brief guidance book on how to structure an SOER and how to place the report on the Internet. UNEP has published a sourcebook on methods and approaches for SOERs (Rump 1996).

Sources: OECD/UNDP (2002), Segnestam *et al.* (2003)

In recent years, a number of major studies and processes have focused on particular sectors. These can be viewed as large-scale SEAs, or even sustainability assessments. Examples include:

- an independent study of the pulp and paper sector commissioned by following the Rio Earth Summit by the World Business Council for Sustainable Development (WBCSD). It was undertaken by the International Institute for Environment and Development. This study reviewed, inter alia, the economic, social and environmental impacts of the paper cycle, examining the concepts of sustainable practice at different stages of the cycle and the implications for current practice (IIED 1996);

- the report of the World Commission on Dams assessed the performance of large dams. It reviewed their development effectiveness and assessed alternatives for water resources and energy development. It also developed internationally acceptable criteria, guidelines and standards, where appropriate, for the planning, design, appraisal, construction, operation, monitoring and decommissioning of dams (WCD 2000);

- the Mining, Minerals and Sustainable Development (MMSD) project (2000-2002) was coordinated by IIED under commission from WBCSD and on behalf of a group of the world's major mining companies. This initiative provided an in-depth review of the mining and minerals sector from the perspective of sustainable development. Arguably, it can be considered a global-scale sustainability assessment of this sector (IIED/WBCSD, 2002)

Finally, throughout the *Plan of Implementation* agreed at the World Summit on Sustainable Development (WSSD), the importance of taking a 'holistic and inter-sector approach' to implement sustainable development is stressed. In keeping with the Millennium Development Goals (MDGs), particular attention is given to poverty reduction. The challenge now is to sharpen tools and strategies to effectively address the root causes of poverty and their linkages with environment and development. Promoted by the World Bank and donors, PRSPs are being developed in many developing countries as the main strategic mechanism to develop across-the-board, pro-poor policies to alleviate hunger, reduce child mortality and provide basic infrastructure.

There is much that SEA can contribute here, especially if it is integrated with other strategic tools and processes. For example, SEA can be used to ensure that environmental opportunities and constraints are reflected in PRSPs, and in the management of natural resources under this agenda. Furthermore, SEA provides a powerful approach to support analysis, integration and synergy across the so-called WEHAB sectors (water, energy, health, agriculture and bio-diversity). They were major themes in structuring the WSSD *Plan of Implementation*. These and other aspects related to international development assistance and cooperation are discussed in Chapter 4.