Chapter X

The contribution of Strategic Impact Assessment to planning evaluation

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X.1 Introduction

Environmental Impact Assessment (EIA) evolved as an evaluation tool, in the early 1970’s, precisely to address non-market values in project planning and development. It was conceived as an impact assessment tool that should operate *ex-ante* of any major public decisions on new regulations, plans, programmes or projects. Its main purpose was to ensure that environmental considerations were properly addressed in project evaluation, at the same level of economic and technical considerations, following a model similar to that already being performed by cost-benefit analysis.

Initially designed to mainly address ecological and physical issues, EIA soon expanded to include social and cultural issues, and later also health, technological, economic, institutional and fiscal consequences. The degree to which a wider scope of issues would be considered differed from country to country, as a function of the range of evaluation tools available to perform individual evaluations in each country.

In its first years EIA applied mainly to development projects, much more tangible and easier to address with respect to management of uncertainty and impacts prediction. The early 1980’s would see its expansion to include programmatic, planning and policy-making levels of action and decision. This widening of scope required more flexible and less quantified methodological approaches given the inherent nature of policy and planning decisions. But it would also depend on the established decision-making system and its capacity to accommodate the rationality that characterizes the EIA model. Again countries have been responding differently.

In this process a new concept was generated. Originally known as EIA of policies, plans and programmes (EIA of PPP), it was subsequently named Strategic Environmental Assessment (SEA) to distinguish the new methodological tool. While loyal to the principles of EIA, SEA should however address levels of decision conventionally considered strategic and, consequently, would need to

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perform differently from project’s EIA, and much more adapted to the more comprehensive and multiple purpose, forward-looking and uncertain, nature of planning and policy-making.

Some argue it did well, others insist there is not much difference between EIA and SEA. Perhaps both views are fair. There is no single model for SEA and depending on the approach adopted it may be more or less effective in meeting its intended purpose. A brief overview on different approaches to SEA, and how SEA is expected to perform, is offered in the next section. Subsequently, this chapter addresses the evolution from EIA to SEA as a planning evaluation tool, primarily dedicated to the assessment of non-market values at levels of policy-making and planning, and whether SEA is responding to the needs of strategic decision-making. It refers to the objectives of SEA and what distinguishes SEA from planning and other evaluation tools. It emphasizes the different interpretations that the term SEA has been receiving in different decision contexts, concluding by calling for the need to be pragmatic, and effective, in approaching impact assessment at strategic levels of decision-making.

X.2 What is SEA

SEA was initially conceived after project’s EIA to assess environmental impacts at strategic levels of decision-making, including policies, plans and programmes. Defined by the International Association for Impact Assessment (IAIA, www.iaia.org) as an impact assessment tool, SEA shares original roots and common principles with EIA.

There are two major features that distinguish SEA in supporting decision-making. One is its capacity to upstream, and facilitate the integration of environmental and social issues with development issues, supporting the design of more sustainable policies and plans at higher levels of decision-making. The other is its need to invite longer-term and larger scale perspectives when considering development options, thus influencing and improving strategic decision-making performance and outcomes.

This means that SEA can help decision-makers in better visualizing possible future environmental and social consequences of development options, while they are still open, therefore ensuring early consideration of the negative effects, and opportunities, of proposed development actions before they are planned, budgeted and approved, also providing for an early warning of cumulative effects and large-scale impacts.

In short, SEA can assist strategic decision-making to:

- integrate environmental and sustainability issues in the policy-making and planning processes
- identify and discuss strategic alternatives while they are open
- promote environmentally sound and sustainable development options
- anticipate impacts that can occur at project level, therefore improving and strengthening project’ EIA
- facilitate strategic minds and informed decision-making
- change the way decisions are made

Over the years multiple forms of SEA have evolved. Some are founded on project’s EIA based approaches, others on policy and planning methodological practices. Different models and approaches to the assessment of conflicts at strategic levels of decision-making have evolved, with SEA shaping, in some cases, more as streamlined assessment processes similarly to project’s EIA, or more flexibly being tailor-made to the inherent policy or planning processes (Partidário, 1996, 1999). The need to have SEA approaches adapted to each economic, socio-cultural and political decision-making realities has led to multiple forms and shapes of SEA that can be observed around the world (Dalal-Clayton and Sadler, 2003).

There are basic features in impact assessment that are performed by SEA as well as EIA. These include scoping the significant factors for assessment and decision, the analysis of an initial baseline situation, the need to consider alternatives in the assessment, the need to ensure public participation and make the decision public, the monitoring or follow-up implementation of the plan or policy. But the level of detail and the information available for SEA are significantly different than for project’s EIA.

In SEA scoping should focus more on options that enable meeting the proposed objectives, than on substantive issues that require extensive field work and observation. We can only identify impacts, and at the best qualify them, but quantification is hardly possible – we work on best estimates. Except for detailed programmatic or major planning decisions, when sufficient time is made available for detailed technical and social analysis, or where reliable inventories or monitoring on the state of resources are available, there is normally no time or opportunity for detailed field work! Timeliness is a key factor in strategic decision-making! The moment to influence key options may have gone by the time sufficient data has been collected. Follow-up, which means assessment based on monitoring and evaluation of evidence, is a challenge in itself, as cause-effect relationships can hardly be traced back to the original policy or planning actions that motivated the symptoms – which may then be the synergistic or cumulative effect of several policies and plans!

SEA is mostly about process management and collective thinking, it is about establishing a coherent framework for decision, that incorporates all dimensions of sustainability, to enable providing the right advice at key decision moments. SEA is about doing the right things, while EIA is normally about doing things right, or perhaps checking if things are being done in the right way. The next section will look at the influence that EIA had on the development of SEA, and how that may be undermining the potential role of SEA as a planning evaluation tool.

**X.3 From EIA to multiple approaches SEA**
Methodologically EIA was created after the principles inherent to cost-benefit analysis, to extend its key assumptions into the environmental arena. With EIA the intention was that the positive and negative outcomes of a given development initiative on the environment, in other words, the environmental benefits and costs, would be adequately addressed. In practice, this proved to be a complex undertaking, even for EIA applied to project-level decisions, because of the non-market values involved in the assessment and also the multiple perspectives, and expectations, represented by different stakeholders. The limitations of employing the detailed quantitative analysis of EIA to broader decision making such as for policies and plans became even more pronounced, creating demand for more flexible approaches at the level of SEA. Arguments in support of the new means of analysis have been advanced by a number of observers over the years (Lee and Walsh, 1992; Therivel et al., 1992; Wood and Djeddour, 1992; Sadler and Verheem, 1996; Therivel and Partidário, 1996; Partidário and Clark, 2000).

But because initial arguments in favour of SEA resulted from the need to improve the quality of projects (Lee and Walsh, 1992; Therivel et. al., 1992; Wood and Djeddour, 1992), it is perhaps understandable that early forms of SEA would focus on decisions that just preceeded projects, following project’s evaluation practices, and adopting an EIA-based model. One of the most outstanding methodological approaches reflecting this EIA-based model is the Programmatic EIA, developed in the USA as an original form of SEA, and still employing this terminology (Ann Miller, personal communication, after consultation of USEPA registry system in October 2002), even though its scope and methodological approach have become more strategic in nature (such as for example, in the case of the US Forest Service Roadless Area Conservation EIS, 2000, or even in the case of the USEPA Proposed Rule on EIA of non-governmental activities in Antarctica, Final EIS, 2002).

It is interesting to note that, in the late 1970s, the US Department of Housing and Urban Development (HUD) produced a methodology for assessing impacts at planning levels and for mainstreaming environmental issues in land-use planning. The Areawide Environmental Assessment Guidance (HUD, 1980) was one of the first guidances for what is currently known as the Programmatic EIA.

The Netherlands is another important source of SEA based on the project EIA model. Indeed, the highly rationalised and structured physical and spatial planning in the Netherlands enabled an easy accommodation of the existing EIA-based model to the levels of programme and planning (Verheem, 1992). However, it did not achieve what was desired for policy making, and a specific tool was designed in 1996 to assist the development of government legislation and regulations, called the Environmental Test, caracterized by a completely different reasoning and methodology (Verheem and Tonk, 1998).

More recently the European Directive 2001/42/EC of 27 June on the assessment of the effects of certain plans and programmes on the environment, commonly known as the SEA Directive (Therivel, 2004), prescribes use of SEA in a way that also follows an EIA-based model, arguably putting at risk expectations of making SEA a more planning and policy oriented evaluation tool, acting as a strategic instrument in the European Union context. The essence of this Directive
lies in the existing requirements for project EIA, as laid down in the 85/337/EC Directive, revised by the 97/11/EC Directive. While allowing for much discretion as to how member states will implement the requirements of the Directive, whether through project’s EIA, planning or any other kind of legal requirements, Annex 1 essentially defines the key information which, together with the specific focus on the preparation of an environmental report, defines, in its essence, the discrete, highly structured, technically oriented EIA-based model.

However other forms of SEA exemplify the policy-making and planning practices stronger influence over the methodological approach in SEA. Some follow very closely the European guiding requirements for the preparation of Structural Funds applications (EU-DG Environment, 1998), which mostly affects Southern and Eastern European countries. Others adopt SEA forms that resemble more strategic tools, such as in Canada or in the Scandinavian countries (e.g. Denmark, Sweden, Iceland, Finland, Norway), where policy-making or a well-conceived planning process currently dominate the decision-making processes. This also would include the UK approaches to SEA, however in this case the British distinguish themselves by adopting different terminology. Here, what was initially called environmental appraisal of development plans (DoE, 1993) was subsequently renamed as sustainability appraisal of regional plans (ODPM, 2000), with an enlarged scope to add on social and economic issues. Lee and Kirkpatrick (2001) have subsequently expanded the concept into the trade impact assessment arena. Figure X.1 shows an array of different forms of SEA as currently implemented in different nations and institutional contexts.

But the need for SEA does not result only from the limitations of project’s EIA. As discussed, SEA offers the capacity to assist the development of policy and planning practices by mainstreaming environmental issues into the policy and planning formulation processes, enabling a stronger environmental focus and ensuring that impact assessment takes place earlier, at the policy and planning levels. Consequently, SEA has a fundamental role in promoting sustainable principles and practices in policy and planning, offering an adequate scale, and decision context, to enable integrated approaches and the consideration of cumulative effects of decision options on important environmental concerns (Wood, 1995; Partidário, 1996; Sadler, 1998; Fischer, 1999; Goodland and Mercier, 1999; Partidário, 1999; Clark, 2000; Sadler, 2001).

The objectives of SEA can thus be simply stated as:

- To contribute to more sustainable and environmentally oriented decision-making;
- To enable understanding environmental values in broader contexts and the cross-integration with social and economic issues;
- To improve the institutional and political contexts that surround subsequent decision-making, in particular those in which project EIA is carried out;
- To promote integrated decision-making, which implies a new form of making decisions.
In summary, SEA should be a decision support tool conceived to assess the impacts that visions, intentions or strategic proposals can have on the environment and on other factors that are relevant for sustainability, with the purpose of improving the quality of strategic decision-making. It can be argued then that SEA must be adopted to act upon strategic initiatives, and not to play the role that EIA is expected to play (Partidário, 2000).

X.4 SEA – the risk of multiple interpretations

Paradoxically, however popular the SEA acronym has become, it has also created a variety of interpretations as to the meaning of the words strategic and environment. As shown in Figure X.1 different extensions of the concept became visible as it developed in practical application, which is leading to the mounting confusion that can currently be observed with respect to the meaning and practice of impact assessment at strategic levels.

The term strategic in SEA was conventionally adopted to identify policies, plans and programmes all together, as opposed to projects. However, the notion of strategic implies a long-term perspective, with objectives set to be achieved in that long-range time period, the identification of a road map and the possible pathways that will enable achieving the objectives within the time set. It also implies a flexible process that enables reviewing and accommodating both pathways and objectives to changing contextual circumstances and evolving social, economic and political priorities. Following this reasoning, while a policy is undoubtly strategic, it is debatable whether some plans and programmes could be described as strategic, especially where they lack a long-term vision and objectives, a broad perspective, an underlying strategic decision culture and the necessary flexibility to enable the adaptation to unavoidable uncertainty.

With respect to the concept of environment, there are different interpretations. Some countries or regions limit its scope to only ecological and physical issues. Others consider the environment inclusive of social and cultural issues, less few go even further to give it a larger interpretation that accommodates physical, ecological, social, cultural and economic issues. The latter represent the need to adopt an integrative approach to enable sound evaluation of development processes.

With the emergence of the sustainable development debate, a new platform is established to address integration. The concept of environment tends to become shortened to its most consensual notion, fully fleshed with physical and ecological issues, albeit with recognized links on to the social and economic dimensions. But these are expected to regain its full dimension under the cover of sustainability, in close relationship with the environmental dimension.

This could mean a move away from the overriding debate of what fits under the term environment. The common notion of sustainable development is that it integrates the three dimensions: environmental, social and economic. This is unquestionable. However there are still difficulties in dealing with more than one dimension in an integrated way, reflected in the need to split up sustainable development into each of its three dimensions, allowing these to be dealt with
separately. Typically this has been the case with the approaches to environmental sustainability! Spliting the concept of sustainable development in this way is not only subverting the integrity of the concept, but making the advance of this new development paradigm more difficult, by cutting it into slices and allowing business as usual to continue.

**Figure X.1 Main forms of SEA applied to policies, plans or programmes**
Policy SEA
- Policy Impact Assessment – environmental assessment of policy proposals to Cabinet approval (Canada)
- Environmental Test - assessment of government legislation proposals (the Netherlands)
- SEA of governmental proposals - assessment of government legislation proposals (Denmark)
- Sustainability Impact Assessment of Trade – assessment of sustainability impacts involved in WTO multilateral trade negotiations (European Commission)

Regional and Spatial Planning SEA
- Regional EA - evaluation of regional environmental and social implications of multi-sectoral developments in a defined geographic area, over a certain period (World Bank)
- SEAn (Strategic Environmental Assessment Analysis) – based on community involvement applies SEA in developing countries (Dutch Aid Agency)
- Environmental Appraisal of Development Plans – assessment of planning policies at council level, with main biophysical insight (UK)
- Sustainability Appraisal of Regional Planning – assessment of regional policy proposals, attempting a broader environmental sustainability approach (UK)

Sector Planning and Programme SEA
- Environmental Overview - applies to the formulation stages of programmes, leads to early identification of environmental and social impacts and opportunities and incorporation of mitigation measures into programme redesign (UNDP)
- Sectoral EA - evaluation of sector investment programmes involving multiple sub-projects; integration of environmental concerns into long-term development; and investment planning or the evaluation of sector policies (WB)

Regional, Spatial and Sector Planning and Programme SEA
- Strategic EIA – SEA applied to spatial plans and programmes using the project’s EIA procedure (the Netherlands)
- Programmatic environmental assessment - process of evaluating groups of actions related geographically or having similarities of project type, timing, media or technological character (USA)

Source: Adapted from Partidário (2002)

This difficulty in interpreting what should be covered by the word environment, or instead by the term sustainability, is one key factor influencing the multiple SEA formats found in the literature, and increasingly in practice, without reasonable and pragmatic methodological differentiations being made. This in turn leads to an array of different terms, including Strategic Environmental Assessment,
Strategic Environmental Impact Assessment, Programmatic Environmental Impact Statements, Sustainability Assessment and Integrated Assessment, all of them apparently prescribing similar principles but intending to represent different instruments, often resulting in too similar or, on the contrary, too different outcomes.

As a result, confusion is spreading across governments and institutions around the world as to the different instruments available to operate at the level of policies, plans and programmes, and how to distinguish between what they do, how to they operate and what can be their expected outcomes. Worse than this, often it is hard to see the difference between SEA and EIA (in its traditional form with project level), and consequently why would SEA be needed.

Notwithstanding, difficulties with applying EIA, designed for the detail involved in projects development, to plans and policies where information and commitments are still quite abstract, are evident. Likewise, when adopting a strategic perspective in policy-making and planning, it becomes clear that a strategic approach to impact assessment is also needed and that an EIA-based model SEA is not appropriate.

The difficulty then is the choice of the right instrument, from the array currently being offered, that best suits the evaluation purposes. This choice is complicated by the fact that SEA share some general features of project’s EIA, namely:

- the same principles of impact assessment (integration, participation, transparency, proaction, etc.);
- similar methodological stages, generally organized in the same logic sequence: screening, scoping, alternatives comparison, impact assessment and follow-up.

X.5 The importance of strategic evaluation – the added-value of Strategic IA to decision-making

The value of SEA is a function of the extent it influences, and adds-value, to decision-making (Partidário, 2000). As existing practice already demonstrates (Thérivel and Partidário, 1996; Bina and Vingoe, 2000; Partidário and Clark, 2000; Fischer, 2001), SEA makes a significant contribution where spatial, or land-use, and sectoral planning failed to incorporate, in a systematic fashion, environmental and sustainability issues into the planning process, or where policy and planning failed to identify and compare feasible alternatives, based on broad, integrated criteria and accountable processes. Even where policy development and planning are already quite integrated and accountable, SEA can operate systematically as an aide-memoire, both as guiding and verification tool.

Despite all these acknowledged advantages, the professional community finds it difficult to understand the new and distinctive role associated to SEA. And this results largely from instances in which the term SEA is used, where the function of SEA is not applied. Many if not most of the cases currently identified as SEA can be questioned as to their actual strategic nature.
It can be argued that there is no reason for establishing new approaches, such as SEA, where situations could be supported by better planning, by EIA, by cumulative impact assessment, or by other forms of well-known impact assessment or planning. However, if we want to be systematic about the identification and assessment of impacts likely to result from strategic options, that is if we want to use a guiding instrument that will facilitate that complex process, then we need an impact assessment tool that is designed to operate in a strategic context. We need Strategic Impact Assessment (IA).

While project EIA is often recognized as an administrative requirement that needs to be fulfilled to satisfy licensing / permitting processes, Strategic IA should be understood and employed more as a facilitator of sound, integrated and sustainable policy-making and planning. The incremental nature of strategic decision-making, to which Strategic IA applies, calls for this facilitating role, which runs in close articulation with the underlying process that is being evaluated.

As argued before (Partidário, 2002), there is a great demand on SEA capacities as it is expected to respond to needs at all levels of decision-making, from policy and planning to programme (see Figure X.1). The impossibility of having a single SEA model or approach, that equally satisfies policy, planning and programme impact assessment requirements, is evident in the multiple SEA forms above cited.

The fact is that each of these levels of policy, planning and programme development are different, have different characteristics, different timings, different degrees of detail, and different purposes and outcomes. Programme development is probably as different from policy development as is project development. Planning, and especially strategic planning, is closer to policy and clearly different from more rationalized approaches typical in programme development or project design. Programme development often is not differentiated much from project development. In fact, the impact assessment of project location alternatives, generally dealt with as a project issue, is treated by the Dutch as programmatic (Verheem, 2000).

As previously argued (Partidário, 2000), while Strategic IA employs the principles of impact assessment, it is more useful to conceive it as a framework that assists the policy, planning and programmatic decision-making process, to provide advice, information or public input at strategic moments, or decision windows. Such “checking points in the policy-making process (...) allow assessment and review of whether and how all relevant factors and concerns are effectively being integrated” (Partidario, 1996). Assisting decision-makers in this way can ensure that the principles of sustainability and impact assessment are fully integrated in future development decisions. When this happens, Strategic IA will be making a difference, adding value to sustainable decision-making.

X.6 Final remarks

Strategic Impact Assessment is designed to address issues raised by long-term and high-consequence decision making. That includes enabling more sustainable approaches in decision-making, better integration of environmental issues and
satisfying other impact assessment needs that are not covered by EIA-based models. Acting at the strategic level means that information is often scarce and deficient. It also means that many alternative options are more political than technical (for example a decision on an emigration policy, or the preference between thermo power or hydro power where both options are technically feasible) which implies different and more flexible approaches, and that many times the analysis depends on qualitative evidence.

It can be argued that impact assessment, in its move from projects to plans and policies, implies moving from technical to a more political level of decision-making. And that means that Strategic IA must reflect that change with respect to more traditional forms of impact assessment, such as project’s EIA or even more streamlined forms of SEA. By focusing on assessment activities, that are introduced into the existing policy and planning processes, built into the existing decision frameworks, Strategic IA is a concept that shapes better to be seen as a facilitator for more sound and sustainable decision-making.

Even so, it is useful to seek opportunities to use other techniques of planning and policy development, along with Strategic IA, to maximize the complementary value of these instruments in improving decision making. This is especially the case when developing national sustainability strategies, national and regional environmental policy plans, environmental operational plans, sectoral and regional and local Agenda 21, and environmental municipal plans.

Likewise, the links between Strategic IA and existing policy and planning evaluation tools and procedures should be explored. Such existing evaluation mechanisms could offer the grounds for the seeding of Strategic IA principles, criteria and requirements.

References


in Miller, D. and Patassini, D. (Ed.), Accounting for non-market values in planning evaluation, Ashgate Publ. (forthcoming)


IAIA (International Association for Impact Assessment) (1999), Principles of EIA and SEA, IAIA.


Partidário, M. R. (2002), Dalla Via alla Vas (From EIA to SEA) in FREGOLENT, L. e INDOVINA, F. (Eds), Un Futuro Amico. Sostenibilità ed Equità, Studi Urbani e Regionali, Franco Angeli, Milano.


in Miller, D. and Patassini, D. (Ed.), *Accounting for non-market values in planning evaluation*, Ashgate Publ. (forthcoming)