STRATEGIC ENVIRONMENTAL ASSESSMENT

Introduction

Strategic Environmental Assessment is being introduced as a method and approach for conducting environmental assessment of program loans, sector development program loans, and sector loans. SEA can also be used as tool in country environmental analysis (see Chapter IV).

The Practice of Strategic Environmental Assessment

1. Policies, Plans, Programs and Projects

In general, all countries having experience with SEA distinguish between policies, plans, programs and projects:

- Policy – "A general course of action or proposed overall direction that a government is, or will be, pursuing and which guides ongoing decision-making."[1]

- Plan – "A purposeful, forward looking strategy or design, often with coordinated priorities, options and measures, that elaborates and implements policy."

- Program – "A coherent, organized agenda or schedule of commitments, proposals instruments and/or activities that elaborates and implements policy."

A hierarchy exists between policies, plans and programs with policies are at the top level of conceptualization and generality; plans are one level down from policies, and programs. Programs make plans more specific by including a time schedule for specific activities. Implementation of a program involves carrying out specific projects, which can be subjected to traditional EIA.

2. SEA vs. EIA

SEA is distinguished from EIA and there are different categories of SEA. Using the definitions above, SEA can be defined as "a systematic process for evaluating and anticipating the consequences of decisions taken prior to the project stage.... Its purpose is to ensure that environmental considerations and alternatives are addressed as early as possible and on a par with economic and social factors in policy, plan or program development."[2]

The term "strategic environmental assessment" is used exclusively for assessments of policies, plans and programs; the term "environmental assessment" is used for assessments of specific projects. **Different categories of SEA** are distinguished:

(i) "Policy impact assessment" or "policy EIA" – the assessment of policies being planned, proposed or already in place.

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[1] Sadler, B. and R. Verheem, 1996, *Strategic Environmental Assessment: Status, Challenges and Future Directions*, Ministry of Housing, Spatial Planning and the Environment, The Netherlands.

[2] Sadler, B. and R. Verheem, 1996, *Strategic Environmental Assessment: Status, Challenges and Future Directions*, Ministry of Housing, Spatial Planning and the Environment, The Netherlands.

(ii) "Sectoral environmental assessment" – "the process of examining potential environmental and social implications of all or most of the potential projects proposed for the same sector."[3]
(iii) "Area-wide or regional assessment" – assessments for policies, plans, and programs related to particular jurisdictions (e.g., land use plans for cities) or natural areas (e.g., river basin development plans).
(iv) "Programmatic" environmental impact statements – a term used primarily in the United States to refer to assessments prepared for federal and state plans and programs, such as land use plans and herbicide spraying programs.

Different types of impacts. The scope of SEA cannot be restricted to consideration of environmental effects alone. The implementation measures associated with policies and programs cause direct economic and social effects. , These economic and social effects often cause indirect environmental effects. In addition to direct and indirect effects, SEAs should also consider "cumulative impacts;" i.e., impacts on the environment that result when the effects of implementing the proposal are added to analogous effects of other past, present and reasonably foreseeable future actions. Cumulative impacts are important because impacts of individual projects may be minor when considered in isolation, but significant when the projects are viewed collectively.

Advantages of SEA. SEA responds to the following often-mentioned criticism: project-level EIA occurs *after* questions related to whether, where and what type of development should take place have either been decided or largely pre-empted based on prior analyses that did not account for environmental concerns. SEA introduces environmental considerations into decision making early, before project location and scale decisions have been made. Also, SEA allows decision makers to focus on the environmental effects of strategic choices, before specific projects are considered. Thus, compared to a project-level EIA, an SEA can consider a broader range of alternative proposals and mitigation measures.

SEA allows for the systematic consideration of cumulative and broad scale (i.e., regional and global) environmental effects. There is often a lack of correspondence between the temporal and spatial scale of cumulative effects and the narrow scope of project-level EIA.

SEA provides a mechanism for incorporating into decision-making considerations related to sustainable development; i.e., development that meets the needs of the present without compromising the ability of future generations to meet their own needs. SEA can draw attention to potential environmental problems early so that decision makers can filter out environmentally damaging projects that might otherwise be the source of costly and protracted delays and controversy.

Tiering. SEA can enhance the efficiency of project-level EIAs when the proposal covered by an SEA is intended to lead to specific projects. Efficiencies can result because of the hierarchy that includes policies, plans, programs and projects. "Tiering" allows for "different

[3] Goodland, R. and R. Tillman, 1996, "*Strategic Environmental Assessment: Strengthening the EA Process,"* in Goodland, R., J. R. Mercier and S. Muntemba (eds.), Environmental Assessment (EA) in South Africa – A World Bank Commitment, Proceedings of the Durban World Bank Workshop, June 25, 1995, The World Bank, Washington, D.C.

levels of detail or specificity of environmental assessment as a proposal moves from a broad or early stage to a narrower or subsequent stage"[4] Tiering can promote efficiency because projects (which are at a lower tier) can make reference to analyses within the SEA at the next higher tier. In this way, those who prepare EIAs for specific projects can avoid redoing analyses for issues covered adequately in an SEA conducted for the plan or program at the next higher tier. In addition to promoting efficiency, tiering can help sharpen the focus of project-level EIAs. This can occur when an SEA for an policy, plan or program includes recommendations about issues to be addressed in conducting project-level EIAs (or, more generally, in conducting environmental assessments for proposals at a lower tier in the hierarchy).

3. Generic Steps in Conducting an SEA

SEA processes, currently in use, have a number of features in common:

(i) **Screening.** A screening exercise is undertaken to answer the following threshold question: Should an SEA be conducted for the subject proposal (i.e., a particular policy, plan or program)?

(ii) **Scoping.** A scoping exercise is conducted to ensure that all high priority issues relevant to the decision being made are addressed in the SEA. There is wide agreement that both direct and indirect (or "secondary") effects of a proposal should be examined and that cumulative impacts should be included in an SEA.

(iii) **Indicators**. Sometimes the description and evaluation of effects is given in terms of "sustainability indicators" (i.e., measures used to gauge whether the proposal will contribute to sustainable development).

(iv) **Stakeholders.** All "stakeholders" – i.e., parties potentially affected by (or otherwise interested in) the proposal – should be given an opportunity to participate in the scoping exercise. While consultation with stakeholders takes place at various points in proposal development, it is particularly important during scoping.

(v) **Identification, Prediction and Evaluation of Effects**. SEA is concerned with the both direct and indirect impacts. The impacts of policies, programs, and plans on the environmental components are normally indirect. That is, the policy, programs, or plans are designed to bring about changes in social and economic behavior. These social and economic changes may in turn lead to potential direct and indirect impacts on the environment. The process of forecasting and evaluating environmental effects in an SEA can employ some of the same methods and procedures used in project-level EIA.

(vi) **Integration**. Integration of environmental, social and economic effects must be part of the impact prediction and evaluation process. This joint consideration of environmental social and economic effects is essential because some proposals will yield direct economic (or social) impacts that will then lead to indirect (or "higher order") environmental effects. While most countries emphasize environmental effects in

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[4] Weiner, K. S., 1997, "Basic Purposes and Policies of the NEPA Regulations," in Clark, R. and L. Canter, *Environmental Policy and NEPA*, St. Lucie Press, Boca Raton, FL.

SEAs, some are beginning to experiment with appraisals that integrate environmental, social and economic effects in a balanced way.

(vii) **Mitigation.** An SEA should include measures that eliminate, reduce or offset adverse environmental effects. The term "mitigation" refers to the "elimination, reduction or control of the adverse effects of the policy, plan or program, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means"

(viii) **Monitoring.** An SEA should include a plan for monitoring environmental effects so that mitigation measures can be implemented if unforeseen effects occur. In addition an SEA should include a plan for ensuring that agreed upon mitigation measures are actually carried out.

(ix) **Independent Review.** An independent review of an SEA provides a check on the quality of the assessment. Results from the review should be considered in preparing the final SEA and in making final decisions. Researchers have developed criteria for reviewing and evaluating SEAs, and examples are given in Table 1.

(x) **Influence on Decisions.** The SEA (including results of the independent review) should be made available to decision makers at a time when those results can inform debate on the proposal and alternatives to the proposal.

Table 1: Summary of Good Quality SEA Criteria[5].

The SEA report should

- contain a description of the project and the affected environment extending beyond the physical boundaries of the project, focusing on key assets, sensitive areas and threats;
- review environmental and sustainability objectives of the plan and propose a set of criteria, targets or indicators for evaluating the effects of the plan's policies and their alternatives;
- contain a systematic identification, prediction and evaluation of potential impacts, including indirect and cumulative ones, with a level of detail appropriate for appraising the plan and the information needs of decision-makers;
- include recommendations on preferred alternatives and a description of suggested monitoring and mitigation measures;
- include recommendations for tiering its results to environmental assessments at lower levels of the planning hierarchy;
- clearly delineate and explain the methodology by which its findings have been obtained and report on findings from public consultation;
- facilitate sustainability appraisal by (a) evaluating environmental sustainability; (b) presenting its findings in a way which will facilitate an integrated sustainability analysis (including proposing sustainability criteria).

[5] Bonde, J. and A. Cherp, 2000, "Quality Review Package for Strategic Environmental Assessments of Land-Use Plans," *Impact Assessment and Project Appraisal*, 18(2): 99-110.

4. Use of SEA in Environmental Assessment of ADB Operations

SEA is a tool for use in the environmental assessment of program loans and sector loans. For program loans, SEA can be used to help prepare the matrix of environmental impacts of policy and institutional actions, mitigation measures, and the institutional basis for implementing mitigation measures and monitoring program. It can also be used to review environmental sustainability objectives of the program and propose a set of criteria, targets or indicators for evaluating the effects of the loan.

For sector loans, SEA can help with the cumulative impact assessment of all projects envisioned as a part of the loan. Also, it can enhance the efficiency of subproject-level IEEs by avoiding the need to redo analyses for issues covered adequately in a SEA for the entire sector. The assessment of subprojects can concentrate on the site-specific impacts of the subproject.

a. Determining whether or not SEA is appropriate

Screening questions for determining whether SEA is the appropriate tool for environmental assessment of a program loan or sector loan[6] are presented below:

1. Which policy area or sector is targeted in the proposal?
   - Is it known to have or likely to cause environmental effects?
   - Are there components that are likely to generate cumulative or long-term environmental consequences?

2. What environmental considerations are raised by the proposal?
   - Does the proposal appear to initiate actions that will have direct or evident environmental impact?
   - Are there any policy, regulatory, or institutional weaknesses relative to environmental management in the sector?

3. What is the state of the country's institutional context?
   - Do property rights on resources such as land tenure security not being recognized by the existing law?
   - Does the institutional framework for managing resources severely limit the role of civil society/communities?

4 What is the state of the country's socio-economic context?
   - Is there high dependency on local resources?
   - What level of pressure on natural resources?
   - What is the rate of urbanization?

5. What is the state of the country's ecological context?
   - Are ecosystems fragile or robust?
   - What is the overall level of ecosystem degradation?

[6] Source: Adapted from Sadler and Verhemm 1996, the World Bank 1993, and Kessler and Van Drop 1998.