



Netherlands Commission for
Environmental Assessment

December 2017



SEA for Regional / Spatial planning

The purpose of this case is to provide information on recent experiences in the use of strategic environmental assessment (SEA) for government plans or programmes with a spatial component. This may refer to spatial plans, land use plans, regional development plans or town and country plans, but also to catchment or river basin plans within the framework of integrated water resources management.

SEA combines a range of analytical and participatory approaches that aim to integrate environmental considerations into policies, plans, and programmes and evaluate the interlinkages with economic and social considerations. It can play a proactive role in integrating issues related to sustainability and equity into regional development planning and in aligning these activities with existing national policies (including biodiversity policies). An increasing number of countries and IFI's have regulatory requirements to apply SEA to new plans and programmes, including regional, spatial and catchment plans.

This document is relevant for:

- Government authorities responsible for regional development and catchment planning;
- Sector departments with interests in specific regions for which spatial plans are developed;
- Authorities responsible for environment, biodiversity, human rights and social justice;

- International finance institutes and donors supporting governments in regional planning;
- Civil society organisations representing stakeholders and/or biodiversity potentially affected by regional plans;
- Private sector representatives with special interests in a planning region.

Issues with Spatial Planning

Regional/spatial planning gives geographical expression to the economic, social, cultural and ecological policies of a society. Spatial planning is used by governments to manage the development of land within their jurisdictions. It is the systematic assessment of land and water potential, alternatives for land and water use, and economic and social conditions in order to select and adopt the best land-use options. In practice, however, spatial planning is often confronted with the following four main problems for which SEA may provide a solution.

Process. In spite of its seemingly integrated character, in practice regional and spatial planning is often characterised by a demand driven approach, producing a wish-list of development plans. In the worst case it is no more than a stapled package of plans from sector departments, interpreted for the region under consideration. In better cases the plan goes through a participatory process in the region and is accompanied by a strategic environmental



assessment (SEA) that assesses the impacts of development options and attempts to identify potential cumulative, synergistic, transboundary and climate effects.

Content. Spatial planning is often guided by short-term economic and political motives, putting a focus on maximum economic development. Environmental and, to a lesser extent, social sustainability usually receive less attention in planning decisions. In many circumstances spatial plans have to provide a regulatory backing to already existing developments, thus running behind actual developments.

Spatial segregation. Land use planning often results in maps assigning a functional category to defined areas: industrial areas, housing development, nature conservation, agriculture, recreational areas, etc. One specific function is thus maximised at the cost of other functions. Yet, most areas are multifunctional; the total economic value of all functions provided by one area may often be higher than maximisation of one function. Space obviously is limited to one earth and according to many the demand from humankind is already surpassing the available surface area of the earth, so multifunctional use of space will become vital.

Planning tradition. Countries may have a long tradition with a structured planning hierarchy, both in spatial (e.g. regional development plans) and in temporal sense (e.g. 5-year development plans). In such situations SEA can be an useful add-on to the existing planning procedures. Other countries may not have a spatial planning tradition at all. In these case, SEA may be used as a structuring principle to kick-start the process; an integrated planning with SEA procedure may evolve from such learning-by-doing approach.

SEA for spatial planning

Spatial plans provide an overarching framework for multiple interventions with potentially serious impacts on ecosystems and related groups of stakeholders. Strategic environmental assessment is a process instrument to assess the potential consequences of a spatial plan against predefined policy goals for sustainable and inclusive development. One of the tasks of SEA is to define a clear set of sustainability criteria to which a plan can be assessed. Furthermore, practitioners are confident that SEA is bringing greater objectivity and transparency to plan making.

Biodiversity Convention perspective on biodiversity mainstreaming through SEA

Mainstreaming. Article 6(b) of the Convention calls for Parties to “integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies”. Spatial or regional development planning is the most widely used cross-sectoral planning instrument. The convention has adopted the ecosystem approach as a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (Decisions V/6 and VII/11).

SEA. The most important tool for addressing the impacts of spatial / regional development plans is strategic environmental assessment (CBD/SBSTTA/21/5). Convention Article 14 asks for the use of impact assessment, elaborated in “Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment” (Decision VIII/28), further detailed for marine and coastal areas in Decision XI/18.

The 2030 Agenda for Sustainable Development includes a number of goals that are closely related to the development of economic sectors. Given the indivisible nature of the 2030 Agenda, these goals and targets must be achieved while also achieving the goals for biodiversity, climate action, as well as multiple targets for sustainability. SEA is an internationally practised, often legally embedded, instrument capable of assessing the consequences of policies, plans programmes from an integrated SDG perspective.

SEA can play different roles. The ‘traditional’ role of SEA is a re-active one; the planning process is in the lead and the SEA assesses the consequences of the plan (and alternatives if available). Recently, SEA is increasingly used in a pro-active manner to inform the planning process. Rather than assessing the impacts of plans, SEA is used to pro-actively inform the planning process on opportunities and constraints for development (see box *Biodiversity in SEA*



for spatial planning). This approach guides the planning process towards more sustainable solutions by developing an environmental friendly alternative and also helps to avoid the perception of environmental assessment being a hindrance to development.

result in an alternative most friendly to the environment to feed the public debate. In short: how does the plan depend on the environment?

- **Impact assessment:** assess the environmental and social consequences of proposed plan alternatives and provide input for the development of mitigation/compensation measures. In short: how does the plan influence the environment?

Biodiversity in SEA for spatial planning

Biodiversity underpins all life and life support systems on earth; without properly functioning ecosystems, human life in its present form would not be possible. Biodiversity provides essential ecosystem services (see below) for system maintenance and for human development. Ecosystem services have been promoted as an effective concept to translate biodiversity into understandable language for planners, decision-makers and the public at large. By translating biodiversity into products and services for present and future stakeholders, the multiple linkages between humankind and its living environment can be described. Ecosystem services represent the linkage between the environment (i.e. space) and human well-being and is critical input for spatial planning.

By describing a region in terms of ecosystems and their services, a picture can be provided of the supply side for a regional development plan. This supply of goods and services can be assessed against the demand for development, thus providing a good knowledge base to assess whether a region has the potential to facilitate human development ambitions. Opportunities and constraints for development can be identified and addressed. When used in a pro-active manner, an ecosystem services assessment can define options for sustainable development.

Categories of Ecosystem Services and examples (non-exhaustive)

- Supporting services: Maintenance of 'system earth' and the services it provides for humans, through soil formation, evolutionary processes, climate regulation, resilience against shocks...
- Services directly used by humans:
- Production services: Harvestable products such as food and fodder; wood for energy and construction; water for irrigation or drinking; medicinal herbs...
- Regulation services: Coastal protection; erosion control; water storage, flood protection; water purification; decomposition of organic material; carbon sequestration...
- Cultural services: Non-material benefits such as religious sites; opportunities for tourism, recreation, scientific research...

Ideally, an SEA will go through both phases in an iterative manner, first by informing the planning process, defining the boundaries of sustainability and providing input for the development of alternatives. Subsequently, the SEA will assess the consequences of proposed plan measures when these become more clearly defined. Further assessment should include the normal good practice SEA elements such as definition and comparison of alternative development options, assessment of potential cumulative effects and assessment of transboundary dependencies and impacts. The institutional capacity to implement the plan and its mitigation measures is increasingly taken into account in SEA.

Implementing spatial approaches through SEA

Landscape Approach. In recent years, the Landscape Approach has gained traction as a way to address major natural resource management challenges in landscapes that must meet a range of stakeholder needs for production, livelihood and environmental goals. It is by definition a spatial planning approach

(see example 1, next page). The notion of a multifunctional landscape, encompassing both conservation and productive areas that influence each other and being owned and/or managed by different actors at various scales, leads to the realisation that institutions are an

Depending on the nature and timing, the SEA can be used for:

- **Opportunities and constraints analysis:** pro-actively inform the planning process on development opportunities and constraints: SEA thus defines the sustainability boundaries for a spatial plan; this may



indispensable part of a landscape and its management. The landscape approach can be traced back to the ecosystem approach as adopted by the Convention on Biological Diversity in 2001.

Example 1: SEA for the Zambezi Integrated Regional Land Use Plan (Namibia)

Integrated land use planning and SEA was carried out for the Zambezi region in Namibia. Ecosystem services (ES) assessment was piloted in the accompanying SEA. The following lessons were reported:

Field assessment:

- Ecosystem services (ES) assessment as early as possible, so that results can be used in subsequent discussions.
- Ensure ample field work.
- Coordinate the ES work with others (planners, mappers) to achieve greatest influence.
- Plan what sort of data will be gathered; express the value of ecosystem services in ways that people understand, and in quantifiable ways. So not restricted only to monetary values.
- Use maps to visualize ecosystem service users and providers. Add features relevant to ecosystem services: location of livestock and fish markets, areas of bush encroachment; selling of woodland products, etc.
- Take photos to better explain environmental features and their link to livelihoods.
- Arrange appointments with as many local representatives of the regional economy, as possible, to dig out ES information.

Compilation of ES information to influence the land use planning process

- Present the opportunities and synergies that arise from ecosystem services
- Present alternative development options that take into account the role of ecosystem services.

Communication

- If economic valuation is applied, then the methods should be understandable to non-experts.
- Express values in a variety of ways, such as livelihoods, benefits to local people, and other ways that decision makes can relate to.
- Maximise political buy-in; explain ecosystem services as a safety net for poor households ('pro-poor').

- Make the ES information appropriate for the target audiences. Link ecosystems with livelihoods, employment and economy. Show people involved in day-to-day activities. Use headlines from newspaper articles to show how issues are relevant to local interests.
- Classification (provisioning, regulating, etc.) of ecosystem services is irrelevant for stakeholders; don't unnecessarily complicate things.

Source: Lessons learned from Ecosystem Services Valuation for the SEA of the Zambezi Integrated Regional Land Use Plan, Namibia. John Pallett, SAIEA, ValuES project www.aboutvalues.net

IWRM for river basin (catchment) planning. Integrated Water Resources Management (IWRM) has been the accepted management paradigm for efficient, equitable and sustainable management of water resources since the early 1990s. The development and sustainable use of water resources requires the allocation of these scarce resources among competing human activities. This implies decision-making in complex situations, often with conflicting interests. Intensive and timely consultation of all stakeholders is of utmost importance. IWRM is defined as a process which promotes the coordinated development and management of water, land and related resources in a river basin. In this respect it deals with planning in a spatial context (see example 2).

Example 2: SDGs for vision development in SEA for catchment planning in Rwanda

Integrated water resources management (IWRM) is required by law for catchment planning and management in Rwanda. In an integrated SEA and catchment planning process, the NCEA has developed an approach to use the SDGs as a basis for discussion with stakeholder on a vision for their catchment. To allow people to step away from thinking from their own sector angle or district perspective, the participants were asked a very broad question: 'Looking at the SDGs, what do you find important for the future of your catchment?'

The above question was elaborated in several sessions to come to a catchment vision:

- Groups organised by sector identified three priority SDGs for their catchment.
- Presentations for all thematic groups, giving an impression on corresponding and opposing views between groups and a basis for a facilitated discussion.
- Individual voting by all participants after having heard the motivations of all groups.

As a result of these sessions there was an overwhelming agreement on the top priority for the catchment plan:

1. Sustainable land management (SDG 15) was considered of basic importance to all other goals. Participants argued that if land, ecosystems and biodiversity are not well managed and integrated into planning, all other goals related to water management cannot be achieved.
2. Ensure access to water and sanitation for all (SDG 6): of course a basic need.
3. Sustainable management and efficient use of natural resources, notably water (SDG 12).

After having agreed on the overall vision for the catchment, further detailed analysis of the SDG sub-targets gave further detail to the definition of a shared catchment vision.

The advantage of using the SDGs is that it takes people away from their own concrete issues and project ideas to a more strategic discussion. Splitting people up according to their sectors resulted in opposing visions, making people realise that discussion and negotiation is part of a planning process. Priorities have to be set. The authority of the SDGs as a deeply debated and worldwide accepted set of development goals avoided discussion on the goals itself; instead participants intensely tried to jointly interpret the rather abstract development goals for their catchment.

Source: NCEA / Water-4-Growth, Rwanda, internal project documents

Role of SEA. Landscape approach and IWRM are usually not embedded in legal procedures and cannot be enforced; implementation depends on the willingness of responsible actors. The benefits from both approaches are often not exploited to the full. World Bank evaluations show that in countries with weak environmental policies, environmental considerations play little role in IWRM processes. Similarly, the intention of creating a participatory, multi-stakeholder process is usually not implemented to its full extent.

Planning and decision making are often influenced by interests of dominant sectors, power play, shady political processes and unequal access to information and decision making. SEA is a process instrument designed to work in a not-ideal world; in many countries it is the only legal instrument that guarantees involvement of affected stakeholders and the sharing of information on important



decision-making. It has no pre-defined content; each SEA is case-specific. It neither has the power nor the intention to stop developments; decisions on a plan can go against the outcome of the SEA. But, the simple fact of having an in-built guarantee of accessible information, stakeholder involvement and transparent decision making creates a level playing field for all actors and stakeholders in the political debate.

The SEA process has many similarities with both IWRM and Landscape Approach, but since it is (legally) embedded in day-to-day reality of political decision making it can be used as an established vehicle to convey the messages of a Landscape or IWRM approach. Table 1 shows the generalised process steps of SEA, Landscape Approach and IWRM; though not entirely overlapping, SEA can clearly provide a procedural umbrella for Landscape Approach and IWRM.

The NCEA

The Netherlands Commission for Environmental Assessment is an independent body of experts. It advises national and international governments on the quality of environmental assessment reports in order to contribute to sound decision-making. In addition, the NCEA supports the strengthening of EA systems in low and middle income countries and makes its extensive knowledge of environmental assessment available to all.

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Table 1: Process steps in SEA, Landscape Approach and IWRM for catchment planning

Main phases	SEA ¹	Landscape Approach ²	IWRM ³
Step 0: Defining the approach	Screening 1. Reach consensus on the need for SEA and its link to planning	n.a.	n.a.
Step 1: Multi-stakeholder platform	2. Find stakeholders and announce start of the plan process	Create multi-stakeholder platform <ul style="list-style-type: none"> Understanding whom to engage Understanding the legal context in relation to public participation Understanding stakeholders 'entry points' to engage relevant actors Procedural considerations for conveners of the platform 	Situation analysis. Analysis of important aspects of the water system, taking into consideration stakeholder priorities and perspectives. (participatory, technical, economic, gender and sustainability issues).
Step 2: Shared Vision	Scoping 3. Do a consistency analysis for relevant policies that have consequences for the plan 4. Develop a shared vision on problems & opportunities...	Shared Understanding of: <ul style="list-style-type: none"> spatial relations in a landscape stakeholders perspectives environmental and socio-economic context institutional context 	Vision development Creating a vision for the medium to longer term future
Step 3: Collaborative Planning	...define plan objectives and draft alternative ways to reach these objectives 5. Set ToR for the technical assessment, based on scoping results	Collaborative planning <ul style="list-style-type: none"> Setting goals and objectives Developing scenarios Spatial planning and zoning Agreeing on priority interventions Agreeing on roles and responsibilities of stakeholders 	Integrated planning (Sub-) catchment plan considering competing (water) interests. Make choices between competing interests explicit. Stakeholder participation. Sector and agency planning Assign activities to sector or regional administrations.
Step 4: Assessment & re-view	Assessment 6. Assess impacts of alternatives and document this. 7. Organise (independent) quality re-view (involving stakeholders)	n.a.	n.a.
Step 5: Decision-making	Formal decision-making 8. Discuss with all stakeholders the alternative to prefer 9. Motivate the (political) decision in writing	n.a.	n.a.
Step 6: Implementation	n.a.	Effective Implementation <ul style="list-style-type: none"> Focus on 'quick wins' Develop communication strategies Engage research partners Convening meetings Maintaining strong leadership 	Coordinated implementation The implementation of the sector and agency plans respects the time schedules and designs formulated in the integrated plans
Step 7: Monitoring, learning, sharing	Monitoring 10. Monitor the implementation and discuss the results	Monitoring <ul style="list-style-type: none"> Determine objectives and indicators for monitoring Establish monitoring system 	Joint monitoring is assured by stakeholders in the catchment, together with the implementing organisations
	n.a.	<ul style="list-style-type: none"> Stakeholder learning 	n.a.

¹ Netherlands Commission for Environmental Assessment: 7 SEA steps

² Denier, L., Scherr, S., Shames, S., Chatterton, P., Hovani, L., Stam, N. (2015). The Little Sustainable Landscapes Book, Global Canopy Programme: Oxford. © Global Canopy Foundation. Available at: <http://www.naturalcapitaldeclaration.org>

³Integrated Water Resources Management Programme Rwanda 2015 – 2019. Project document 15 October 2014.