

Climate change adaptation and Strategic Environmental Assessment

Climate proofing of policies and plans

We define Strategic Environmental Assessment (SEA) as a family of approaches that aim to integrate environmental and climate change considerations into policies, plans and programmes and evaluate their interlinkages with economic and social considerations. SEA can play a key role in the integration of adaptation to climate change in policy making. This key sheet provides information based on our experience on how to use SEA to integrate adaptation to climate change in policy making

According to the Intergovernmental Panel on Climate Change 2009, climate change will have effects on all countries and its inhabitants. Nearly all governments recognise the need to adapt to the expected impacts of climate change. We consider SEA to be the tool to integrate adaptation to climate change in policy making. This information is in line with the OECD-DAC Guidance; In this key sheet we use the term 'climate change inclusive SEA'. Climate change mitigation is dealt with in another key sheet.

SEA is a tool to:

1. structure the public and government debate in the preparation of policies, plans and programmes;
2. feed this debate through a robust assessment of the environmental and, where required, other consequences;
3. ensure that the results of the assessment and the debate are taken into account during decision making and implementation.

This means that public participation, transparency and high quality information are key principles. SEA is therefore more than just the preparation of a report; it is a tool to enhance good governance. In principle, SEA also includes social and economic issues.

National climate change policy

A national climate change policy is a condition for integrating adaptation to climate change in SEA. This policy ideally contains information concerning:

- Expected climate changes for the medium and long term;
- Risks to the society (population and economy);
- Vulnerability of the different areas and land use types;
- Objectives such as safety levels that need to be achieved;
- Identification of adaptation options.

In addition, a strategy provides information on how to achieve the objectives identified in the policy and allocation of funds. The policy and strategy are used as a reference framework in SEA. Without this framework it is more difficult to utilise the SEA potential.



- **SEA – for climate proofing of the Netherlands**
The Netherlands is vulnerable to climate change. About 30% of the country is below sea level and it is located in the delta of two large north-west European rivers the Rhine and Meuse.
- **SEA – space for rivers**
due to climate change it is expected that the discharge of these two rivers will increase by approximately 25%. To maintain the safety level of one flood each 1350 years, adaptation measures are necessary. Traditional dikes, protecting the Netherlands for more than 1000 years, are not sufficient anymore. Therefore, the 'space for rivers' approach was introduced in SEA aiming to maintain the safety level and improve the spatial quality. Adaptation measures such as dike relocation, wash land excavation, removing obstacles and water retention and storage were elaborated and compared in alternatives. The public was consulted at the start and after the SEA report was ready. In the next step 20 EIAs were conducted for a detailed design at project level.
- **SEA – to strengthen the coast**
The Netherlands has a soft coast of about 300 km, protected by natural dunes and man made dikes. Climate change will cause sea level rise. Eight "weak linkages" have been identified in our coastline. Here, the safety level of one flood each 10.000 years can not be secured and adaptation is necessary. A number of foreshore and landward adaptation measures were identified. For each linkage, alternatives consisting of a mix of measures were developed in consultation with the general public. Decisions have been made and as a result in 2015 the Netherlands is climate proof until 2100.

Good practice SEA steps

SEA principles are similar for policies, plans and programmes. However, SEA processes and procedures may differ. The following SEA steps apply mainly at plan and programme level. The information, required to execute a climate change inclusive SEA, is printed in italics.

A. Establishing the context for SEA

- Screen and decide on the need for SEA; *Decide whether this plan is at risk from climate change**.
- Set objectives: develop a common vision on (environmental) problems, objectives and identification of alternatives, with all stakeholders; *The national or sector objectives for climate change adaptation need to be specified for this plan. Anticipate a long term horizon of at least 50 years.*
- Identify stakeholders in the planning process and prepare a communication plan; *Which groups will be most affected (positively as well as negatively) by climate change impacts and adaptation measures.*

B. Implementing SEA

- Scope the content for the SEA; *Are the objectives of the plan feasible under the different climate change scenarios? Via which mechanisms does climate change influence the plan objectives?*
- Collect baseline data; *Climate change scenarios should be used to assess the expected impacts;*
- Assess alternatives; *Identify adaptation options that can be used as building blocks for the different alternatives*
- Identify how to enhance opportunities and mitigation of impacts;
- Assure quality through independent review and public involvement of draft reports;
- Document results and make these available.

C. Informing and influencing decision making

- Organise a meeting of stakeholders to discuss the SEA results and formulate recommendations for decision making;
- In writing, justify the (political) choices that have been made in the finally adopted policy or plan;

D. Monitoring and evaluation

- Monitor decisions that have been made as well as the implementation of the adopted policy or plan;
- Evaluate both SEA and policy or plan.

SEA is flexible, i.e. the scope and level of detail of the above steps can differ depending on time and resources. Available time mainly depends on the timing of the planning process. Costs for SEA may vary correspondingly from a few thousand to half a million Euros.

Vulnerability assessment and SEA

Vulnerability to the impact of the climate can be defined as the degree to which a natural or social system is susceptible to climate change. Vulnerability can be determined at different levels. The objective of vulnerability assessment (VA) is to inform specific stakeholders about options for adapting to the impact of climate change; this should inform and influence decision making. Over the last years, this VA has been developed

by the climate change community. This objective of VA is in line with the objective of climate change inclusive SEA that focuses on decision making by government authorities. Therefore, we consider VA as one of the members of the SEA family of tools. Ideally, a VA should be part of a climate change inclusive SEA because SEA has developed additional safeguards for well-informed decision making.

Climate inclusive SEA – coastal development in Mozambique

At the request of the ministry of environment in Mozambique the NCEA is advising on climate inclusive SEA for development of a spatial plan for the coast at district level. The 3000 km long coastline is divided into three sections. Planned developments in the field of mining, oil exploration and tourism need to be climate proof. A long-term time horizon will be applied. In 2010 the SEAs will become available.

Services provided by the NCEA

With regard to climate change inclusive SEA we can provide tailor-made introductory training and general support.

With regard to SEA in general, the NCEA can contribute to:

- Introductory training;
- Institutional assessment;
- Coaching and training on-the-job of SEA teams;
- Introduction and design of SEA systems (see key sheet *SEA introduction*);
- Advising on ToR for and quality review of individual SEAs. (see key sheet *SEA advisory reports*).

More information

For more information, visit our website at www.eia.nl:

- News
- EIA/SEA country profiles
- Information resources (online library, NCEA publications, key sheets)
- Projectdatabase
- Helpdesk@eia.nl: for questions and suggestions

Other websites:

- OECD-DAC: Guidance note on SEA and climate change adaptation: www.seataskteam.net/guidance.php
- IAIA SEA Performance criteria: www.iaia.org

*) Tools for climate change risk screening
www.preventionweb.net/english/professional/publications/v.php?id=13122