

Environmental Assessment of Plans and Programs

*Nordic experiences in relation to the
implementation of the EU directive 2001/42/EC*

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Nordic co-operation

takes place among the countries of Denmark, Finland, Iceland, Norway and Sweden, as well as the autonomous territories of the Faroe Islands, Greenland and Åland.

The Nordic Council

is a forum for co-operation between the Nordic parliaments and governments. The Council consists of 87 parliamentarians from the Nordic countries. The Nordic Council takes policy initiatives and monitors Nordic co-operation. Founded in 1952.

The Nordic Council of Ministers

is a forum for co-operation between the Nordic governments. The Nordic Council of Ministers implements Nordic co-operation. The prime ministers have the overall responsibility. Its activities are co-ordinated by the Nordic ministers for co-operation, the Nordic Committee for co-operation and portfolio ministers. Founded in 1971.

Stockholm, Sweden
2003

Foreword

By July 2004 all EU member countries will be expected to have implemented the directive 'On the assessment of the effects of certain plans and programmes on the environment' (2001/42/EC)(SEA directive) in their national legislations. By the fall of 2003 all of the Nordic countries have presented drafts of this implementation or made investigations providing basis for the implementation. Moreover, a number of national public authority investigations have been conducted as a basis for future implementation. On a Nordic basis two projects have been conducted with the aim of providing a direct input into the preparatory work for the SEA directive: *Nordic experiences of Environmental Assessment of plans and programmes – identification of mutual research and development needs especially in relation to planning for sustainable development* (reported in Nordregio EP 2003:1) and the project reported in this volume *Nordic experiences of Environmental Assessment of plans and programmes – basis for implementation of the EU directive 2001/42/EC*. These two projects and the three workshops that formed a part of them (February 2001, January 2002, Internet workshop October 2002) as the 5th *Nordic Environmental Assessment Conference – Planning for Sustainable Development - the practice and potential of environmental assessment* (August 2003) are all aimed at providing Nordic input to the implementation of the directive. The Nordic knowledge base provides a broad complementary input for national implementation in terms of an increased understanding of the peculiarities of national planning and SEA systems and a broader perspective concerning SEA experiences as possible legislative and administrative solutions.

The Terms of Reference for the project reported here were developed in co-operation between the Nordic representatives. The aims were to:

- Further the understanding of your own national SEA experiences and prerequisites for implementing SEA. A short historical overview of the national SEA discussion and a description detailing when previous SEA legislation was introduced. The current SEA legislation is then briefly described, followed by a description of some existing and ongoing national examples of SEA in practice. Through presentations, comparing of experiences and discussions in both one electronic as

one 'physical' Nordic workshop the understanding of SEA was to be broadened and enhanced.

- Relate the collated experiences directly to the national legal implementation of the EU SEA directive, in order to be of use in the process of national implementation as well as for the coming production of national implementation guidance. This was to include a national description; an overview and an analysis (mapping) of which plans and programmes were likely will be covered by the directive through the wordings in articles 2 and 3. The mapping should relate to national, sectoral and regional plans as well as local plans. The aim was however also to further the discussion on what SEA should or could be, besides being just an implementation of the directive. A more critical view was thus asked for.
- Be of direct use and as such to feed into the national work proceeding negotiations for the implementation of the directive. Though in each case, the focus should also be of interest to other Nordic countries.

The approach chosen was to have both a mutual general framework, described above, for each of the five countries involved, combined with the choice of a particular national issue upon which to focus. Denmark chose to focus on the issues of monitoring, integrated or separate SEA processes and the timing of SEA work in relation to planning. An overview of SEA from different sectors and their attendant problems and challenges was the focus of the Finnish contribution, with the link between different planning systems also being dealt with here. As regards Iceland, special attention was given to public participation, reporting and quality assurance. Screening and the interpretation of significant environmental impacts were highlighted in the Norwegian contribution. Two different contributions constitute the Swedish part: one highlighting the scope of the directive, and another focussing on the experiences of SEA in Swedish municipal comprehensive land use planning.

The comparative value added for the participating countries was achieved it was assumed, mainly through the communication and discussion of results from the national studies. Moreover, an interactive homepage for the project was maintained during the period October 2002 and March 2003, where different versions of drafts were presented. This homepage was accessible for a broader set of participants including relevant Ministries, researchers as authorities.

The following people participated in the writing of the contributions and/or in the two workshops:

- Denmark:** *Henrik Hvidtfeldt* (Danish Forest and Landscape Research Institute)
Gert Johanssen (Ministry of the Environment)
Lone Kørnøv (Department of Development and Planning, Aalborg university)
- Finland:** *Mikael Hildén, Pauliina Jalonen* (both from the Finnish Environment Institute)
Marja Mäntynen (Ministry of the Environment)
- Iceland:** *Ásdis Hlokk*
Matthildur Kr. Elmarsdóttir (both from the Planning Agency)
- Norway:** *Martin Hanssen* (NIBR)
Ingvild Swensen (Ministry of the Environment)
- Sweden:** *Ebbe Adolfsson* (Swedish Environmental Protection Agency)
Lars Emmelin (Blekinge Institute of Technology)
Sten Jerdenius (Ministry of the Environment)
Robert Johannesson (The National Board of Housing, Building and Planning)
Peggy Lerman (Lagtolken AB)
Ann Åkerskog (Landscape planning, Swedish Agricultural university)
- Nordregio:** *Hólmfrídur Bjarnadóttir*
Tuija Hilding-Rydevik (project leader)

The Nordic Council of Ministers financed the project which also constitutes an activity that is part of the Nordic action programme for 2001 – 2004, *Planning as an instrument for sustainable development in the Nordic countries*, which was accepted by the Nordic planning ministers in October 2001. The aim of the action programme is to highlight the role of spatial planning in promoting sustainable development. This programme is expected to complement the Nordic sustainability strategy and the Environmental Action Programme undertaken by the Nordic council of ministers in 2001.

Stockholm, November 2003

The Nordic Environmental Assessment Network

The Nordic countries have now had more than ten years of experience in research and development co-operation concerning Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA). The Nordic *Ad hoc* group on EIA, under the Nordic Council of Ministers, initiated and institutionalised this co-operation. Co-operation continues today across several arenas, for example through the Nordic EA Network, under the auspices of Nordregio. The Nordic EA Network mainly concentrates on co-operation in the context of R&D projects and connected seminars and conferences, while a home page is also maintained: www.nordregio.se (EA Network)

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The Danish experience of Strategic Environment Assessment

Lone Kørnøv and Henrik Hvidtfeldt

Introduction

This article recounts a number of examples of the Danish experience with Strategic Environmental Assessment. The article describes the national, regional and municipal levels with the main weight on the municipal level. The experience is, of course, incomplete, as only a few municipalities have undertaken SEA in practice, and then only in trials that include only a part of the complete process. Nevertheless, we can here still point to some of the major conclusions arrived at on the way.

The article consists of three parts. The first part considers the historical background on SEA in Denmark. The second is a description of the plans and programmes in Denmark expected to be affected by the directive, while the third part undertakes an initial evaluation of how the directive can be implemented in Danish municipal planning – with a view to three conditions: accommodation of SEA in the planning process, SEA with and without objectives and monitoring the development.

Historical background and overview

In this section a short overview of the historical background is given concerning what has happened with regard to environmental assessment in Denmark. The governmental bills and statements are considered followed by trials and practices from regional and municipal planning.

Evaluation of the bills and of the ministry's statement

On the 27 February 1992 a proposal regarding the environmental assessment of governmental bills was presented in the Danish Parliament. The proposal was introduced, as an extension to the governmental circular from 1983 that all bills of Parliament should include comments on their economic and administrative consequences. The proposal was approved without the consent of the ruling government and was one of the first that the new government implemented with a circular sent at the beginning of 1993 (The Prime Minister's Office 1993). Before this a cross-departmental governmental team of officials closely evaluated the proposal. (Ministry of Finance, December 1992) Since its issue the circular

has been updated and extended several times with new guidelines [The Prime Minister's Office, 1995 & 1998].

Initially the Finance Act was not included in practise. During budget negotiations in 1996 it was however temporarily agreed that,

‘[t]here would be undertaken systematic environmental assessments of future Finance Acts, so that information of the implication upon central environmental parameters from the given Finance Act would be available with its presentation and therefore the environmental parameters would be evaluated on a par with national economic and industrial implications. Environmental assessments will be undertaken for the first time with presentation of the budget for 1998’ [Ministry of Finance November 1996].

Since then environmental assessments have been conducted for Finance Acts for 1998, 1999, 2000, 2001 and 2002 [Ministry of Finance 1997, Ministry of Finance 1998, Ministry of Finance 1999, Ministry of Finance 2000, Ministry of Finance 2001].

The latest environmental assessment of a finance act is the previous government's assessment for the 2002 budget. Here we find three Annexes, where Annex 2 concerns solely environmental evaluation of bills, in a format from the Ministry of Finance home page [Ministry of Finance, August 2001]. The present government's finance bill for 2002 is not environmentally evaluated.

‘The government has decided to abolish environmental assessment of the finance act in the present form. The government has found that it is necessary to improve environmental assessment by including the environmental impacts of economic policy, including expenditure policy, with interdisciplinary and overall oriented analyses.’ [Parliament 2001-2002].

In the environmental assessments of the finance bills a summary of experiences with environmental assessment of the government bills and other initiatives is included.

‘Similar to environmental consequence assessments of material bills, where a preceding assessment of environmental impacts are undertaken, [this] environmental assessment of finance bills includes an assessment of the affect on the environment of the public initiatives after the bill initiatives are undertaken.’ [Ministry of Finance August 2000, p.139].

In the environmental assessment of the finance bill for 2001 and for 2002 (the previous governments suggestion for the finance bill) it was decided to divide the effects of the environmental assessment into three groups:

- Parliamentary debates show that the descriptions of the environmental impacts are insufficient.
- Parliamentary debates show that the descriptions of the environmental impacts are not included in the debates. This could mean that the description of the environmental impacts are assessed either as sufficient, or that the environmental impacts compared to the bills final material have not been considered significant.
- Parliamentary debates show that the description of the environmental impacts are included in the debates and are helpful to qualify them. [Ministry of Finance August 2000, p.143]

Based on the above, an assessment has been performed of the first treatment in Parliament of the 40 parliamentary bills from financial years 2000/2001, where the environmental impacts are included in the debates. For 29 of the bills the environmental impacts were considered in the debate in Parliament, while for 11 of the bills this was not the case.

In summary, it was concluded that in most cases, where an environmental impact assessment had been made, the information was used by the politicians in the debate [Ministry of Finance August 2000, p.144].

The assessment of bills and other governmental proposals have also been evaluated from a research angle. For more information see the publications mentioned below, in which some conclusions are presented.

An investigation of how the environmental assessment was presented in two bills [Elling 1997] shows e.g.:

- That presentations are often too abstract, summarising, without details and without documentation and statements.
- That only parts of the environmental assessment are presented to the politicians.
- That no principal of significant barriers to including alternatives and public participation exist.

An investigation of how the environmental assessment was used in the debate in Parliament (Ministry of Finance 1999, 2000) showed amongst other things:

- That environmental assessment is now more readily considered in the debate than previously.
- That the politicians usually raise little or no critique of the environmental assessments undertaken.

An analysis of the preparation of environmental assessment for nine bills (Elling 2000) revealed, for example:

- That systematic scoping is limited, and that none of the analysed ministries worked with significance criteria.
- That not all significant impacts are assessed, and that the emphasis is put on positive impacts.
- That there is a tendency for environmental assessments to be narrowed down and adjusted on the executive level.
- That the higher the quality of the environmental assessment the more the political debate is characterised by political prioritising. If the quality is poor the debate will instead be concerned with the identification of environmental impacts.
- That officials have no wish for further guidance or more explicit requirements regarding either content or assessment procedures, though they would like more examples.

An analysis of the political use of environmental assessment [Holm, Merrild and Schmidt 2001] shows, for example:

- That the politicians want reliable assessments. This means assessments that include all significant impacts (both positive and negative), that are short and well arranged, and finally assessments that are useable for inspiration and political consideration.
- That the spokespersons on the environment need better-elaborated assessments.
- That SEA means that it is more legitimate to raise environmental concerns in Parliament.

Evaluation of regional and municipal plans

In this section we will focus on regional and municipal plans. The regional planning in the County of North Jutland is the most comprehensively illustrated. Here we have both an environmental assessment and an evaluation of that assessment. Less comprehensively illustrated are the trials by different municipalities with initiatives and different ways of undertaking environmental assessment but with no evaluation of the experience gained.

Among other things the North Jutland project examines how the environmental assessment process and the regional planning process can be integrated. The content of the total sequence of environmental assessment in the planning process can be divided into five phases:

- Scoping (delimitation of problems) of the existing plan and definition of environmental criteria.
- Environmental assessment of the existing plan.
- Environmental assessment of the revision.

- Public participation.
- Final plan proposal and adoption.

For use in the County of North Jutland environmental criteria were developed with relevance for the specific plan revision, division in planning themes/plan paragraph, formulation of significance criteria, etc.

The trial with environmental assessment in regional planning was evaluated [Elling 2000]. Interviews with officials, politicians and the public revealed e.g.:

- That environmental assessment needs to be done in the planning process and the documentation of the assessment should be part of the plan itself.
- That environmental assessment did not effect the content of the plan significantly. From the planners' point of view, environmental assessment did not bring any new knowledge. The value is to be found instead in the transparency and communication of knowledge and prioritising to both the politicians and to the public. From the public's point of view, more room for public influence on the environmental assessment is needed. The politicians look at environmental assessment as a tool for them to receive information for political decision-making and to assess the impact of SEA.
- That environmental assessment is a tool to politicise planning.
- That a lack of focus as regards the objective of SEA and the lack of focus in respect of the organisational relations and duties have negatively affected both working possibilities and the opportunity for participation.

A research project with an analysis of decision-making processes with regard to regional planning in the County of North Jutland showed that [Kørnøv 2002]:

- It was difficult to attain consistency in planning, because each department is working with and preparing a defined part of the overall plan – with limited input from other departments
- Each department is working on the basis of their own understanding of which environmental parameters are important
- There is limited dialogue between departments as regards their understandings, norms etc. and thereby learning is limited

- There is limited focus and transparency in respect of conflicts and weighing of interest between the different areas and interests in planning.

It is therefore important to consider the existing organisational structures, e.g. division of professions and competence in a practical implementation of SEA in planning. A well-defined procedure and assessment technique does not do the job alone.

An initial publication, from 1999, on the environmental assessment of municipal plans describes what SEA is and states different views and experiences with SEA – based upon e.g. chosen literature and practice [Hvidtfeldt and Møller-Jensen 1999]. The report can be seen as a basis for further work as regards the testing of different ways of integrating SEA into municipal planning. Another report from 2001 highlights the different ways in which SEA can be integrated into municipal planning [Hvidtfeldt and Kørnøv 2001]. Among other things the report collates experience from a number of Danish municipalities already testing environmental assessment. In particular, the objectives relating to strategic environmental assessment and municipal planning, with a view to sustainable development, are focussed on here.

Plans and programmes affected by the directive

On the basis of an enquiry to all of the ministries and discussions with some of the ministries based on guidance material received from the Commission, an investigation of which plans and programmes will be covered by the directive is undertaken here.

Plans and programmes expected to be affected by the directive

The following table shows the response from each ministry to the question whether plans and programmes under their field of responsibility will be covered by the demand for environmental assessment:

Ministry	The ministries own view of whether plans and programmes under their field of responsibility are covered
Ministry of Employment	Expect no plans and programmes to be covered
Ministry of Finance	Expect no plans and programmes to be covered
Ministry of Defence	Generally have an understanding that all defence plans and programmes for activities about defence areas alone serve the national defence and therefore are excluded after article 3, clause 8. Concrete establishment and definition, for example of a light house, will after 'Farvandsvæsenets' check assessment be included under the exclusion clause in article 3, clause 3 while with a general marking revision it will be relevant to develop a SEA
Ministry of Interior and Health	Expect no plans and programmes to be covered
Ministry of Justice	Expect no plans and programmes to be covered
Ministry of Ecclesiastical Affairs	Expect no plans and programmes to be covered
Ministry of Culture	Expect no plans and programmes to be covered
Ministry of Refugee, Immigration and Integration Affairs	Expect no plans and programmes to be covered
Ministry of Food, Agriculture and Fisheries	Expect no plans and programmes to be covered
Ministry of Science, Technology and Innovation	Decommissioning of Risø's nuclear facility going beyond 2006. Emergency facilities are excluded from the directive.
Ministry of Taxation	Expect no plans and programmes to be covered
Ministry of Social Affairs	Expect no plans and programmes to be covered

The Prime Minister's Office	Expect no plans and programmes to be covered
Ministry of Traffic	The traffic plan for the nationally financed passenger traffic being carried out as public service The TEN programme/projects.
Ministry of Foreign Affairs	Expect no plans and programmes to be covered
Ministry of Education	Expect no plans and programmes to be covered

For the Ministry of the Environment the directive may cover the following plans and programmes.

Department or Agency	Act
Spatial Planning Department – The National Planning Report – National Planning Directives – Regional plans/revisions/supplements – Municipal plans/revision/supplements – Strategy for municipal planning – Local plans – The Strategy for Local agenda 21	The Planning Act, § 2 The Planning Act, § 3, clause 1-2, 4 The Planning Act, § 6 The Planning Act, § 11 The Planning Act, § 23a The Planning Act, § 13 The Planning Act, § 33a
Danish Forest and Nature Agency – Plans for extraction of raw material – deposit in territorial waters	The Raw Materials Act, § 18 and § 22

Accommodating SEA in the plan process

The directive is a framework directive determining the overall procedural requirements for environmental assessment. It is up to each member state through national implementation to make the final decision in particular on aspects of methodology and content. The challenge is to decide upon an implementation method that will strengthen existing municipal planning. Before SEA is implemented four aspects are important to consider and clarify:

- Interaction: What form shall interaction between SEA, Agenda 21 and municipal planning take?
- Procedure: When shall SEA begin?
- Methodology: How shall SEA be carried out?
- Organisation: Who shall undertake the SEA?

In the autumn of 2001 a workshop was held with the aim of making participants consider the above questions – based on their practical experience. Thirty-one people participated from 15 municipalities, with 3 from private consultancies, while there was also one representative from the Ministry of Energy and Environment.

It is crucial for the success of SEA that it fits into the planning process in an appropriate fashion. This is particularly the case with regard to the time when the SEA actually begins, and in terms of interaction with the planning process. These aspects will be discussed further below. A summary of some of the results from a questionnaire sent to 61 municipalities regarding existing planning and its impact for the future implementation of SEA is also discussed.

Municipal practise with regard to planning

In order to get a better insight into the municipalities' work with municipal planning, the Danish Forest and Landscape Research Institute produced an internet-based survey, contacting 61 municipalities, of who 56 answered. The objective of the survey was to gain insight into the realities in which the new tool will have to work. The people responsible for municipal planning were asked to answer a number of questions – with the most significant replies/results being referred to below. The survey concerned issues such as the size of resources used for municipal planning, environmental considerations in planning, the sustainability parameters that may be considered and how this would be done, as well as the assessment of alternatives, and finally the issue of barriers for interdisciplinary co-operation (internally) in the municipalities was raised.

Concerning the size of resources used in municipal planning, the investigation showed that in most of the municipalities (4/5 of all those investigated) only one person worked with municipal planning. Only in the larger municipalities did two or more people work with municipal planning.

Further, the investigation showed that this one person, in most of the (small) municipalities that work with municipal planning, in almost half of the occurrences (2/5 of those questioned) used under 10 % of their work time on this task, and that the other half (2/5 of all questioned) only used between 10-30 % of their time on municipal planning. It would therefore be inappropriate, with the implementation of EU's directive in mind, to expect a resource demanding effort from the municipalities.

Our investigations also showed, in relation to environmental considerations in planning, that most of the municipalities (4/5 of those questioned) take environmental issues into consideration, and described them in their municipal plan. The parameters considered to be most important are ground water, drainage and water environment together with waste (between one half and 3/5 of all questioned) while in some municipalities, noise is also considered. It is therefore clear that traditional environmental conditions are considered.

The investigation showed that it was only in relatively few municipalities that planning alternatives were developed and evaluated (1/5 of those questioned). Furthermore, our investigation also showed that in those few cases where an alternative was developed, it involved a minor part of a municipality or a specific problem, for example the development of a port or the planning of a housing area. It is clear then that only in certain situations is it relevant and appropriate to develop and evaluate alternatives. It would however be beneficial to develop guideline instructions or 'good advice' guidelines as to when it would be advantageous to develop and evaluate planning alternatives.

In connection with the investigation it was asked especially to the so-called zero alternative, i.e. what further developments can be expected, if development continues without intervention. Zero alternatives are a requirement in the EU's directive, and they will come to play an important role when the directive is implemented. The directive requires that light should always be shed on 'the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme'.

The directive works with a wide environmental terminology that exceeds the municipalities' own technical departments' traditional work areas. In practise this means that inter-departmental co-operation will be

necessary. With regard to possible barriers to inter-departmental co-operation, the investigation showed that 'shortage of time' was the most commonly assessed barrier (almost $\frac{3}{4}$ of those questioned) but also that a lack of understanding with other non-technical departments can be a significant barrier (more than $\frac{1}{2}$ of those questioned). This partial result indicates that it is important to be considerate towards different departments' backgrounds and understandings, and to allocate sufficient time to facilitate the necessary interdepartmental opinions of the environmental consequence of numerous planning guidance instructions.

Alternative models for accommodating SEA into the planning process

The choice of which environmental evaluations are included as part of the process with the development of a plan or programme is up to the individual member state, as long as the environmental assessment 'is carried out under preparation, and prior to adoption of, or introduction of the legislation procedure for a plan or a programme' (Article 4, nr. 1). We have looked at two models of how this can occur. They differ first and foremost with regard to the actual time that the SEA is undertaken in the context of the wider process.

In the first model the plan is initially developed, thereafter the SEA is developed based upon the plan; thus the SEA begins relatively late in the process. This model can be labelled, 'environmental evaluation of the municipal planning', meaning that SEA is primarily developed at a decided point of time in the planning process.

Choosing this model, where the environmental assessment is developed after a draft municipal plan is made, may however result in there being little actual impact for the SEA to make in the formulation of the plan. The SEA will likely be developed by a small group, and the opportunity for interdepartmental learning in the organisation as regards the links between planning and the environment will not be optimally exploited [Kørnøv 2002].

Often it will be too late to analyse alternatives where the environmental assessment is not introduced before a planning draft is complete. For SEA to experience a meaningful role in the decision process it is thus a requirement that the environmental assessment begins as early as possible, so that there are real possibilities to influence municipal planning with alternatives and changes.

In the second model the plan and the SEA are developed concurrently and in close co-operation, i.e. the SEA begins relatively early in the process. This model can be labelled, 'environmental assessment in the municipal planning process.' This approach suggests that SEA is devel-

oped in stages as the municipal plan is formulated. In this way the SEA becomes an integral part of the planning development, meaning that the planning process takes on a more interactive character in relation to the protection of environmental conditions.

The figure above shows the integration of SEA in relation to the two models in a typical Danish municipal planning process.

There are thus a range of different possibilities for public participation in the SEA process depending on the integration model chosen. With reference to the directive the public has to be involved when a draft plan and an accompanying environmental report are written. In other words, the public has no formal opportunity to be consulted before publication of the environmental report. However, the directive is only a framework directive, and thus each member state is free to decide on their principles for public participation. It will be possible to use the two public hearings with a reference to the planning act as an opportunity to attain further input for the environmental assessment. The first public hearing phase in particular is interesting for the environmental assessment if one chooses the model where the SEA begins early on in the planning process. In this case this public hearing phase can be used to gain a first-hand understanding of the various planning alternatives.

Workshop Conclusions

During the above mentioned workshop participants were asked to discuss the two models and if possible to choose one as their preference for how SEA should be integrated into the existing planning process. A clear conclusion emerged that SEA should be integrated into the development of the municipal plan and thus that it should therefore begin as early as possible.

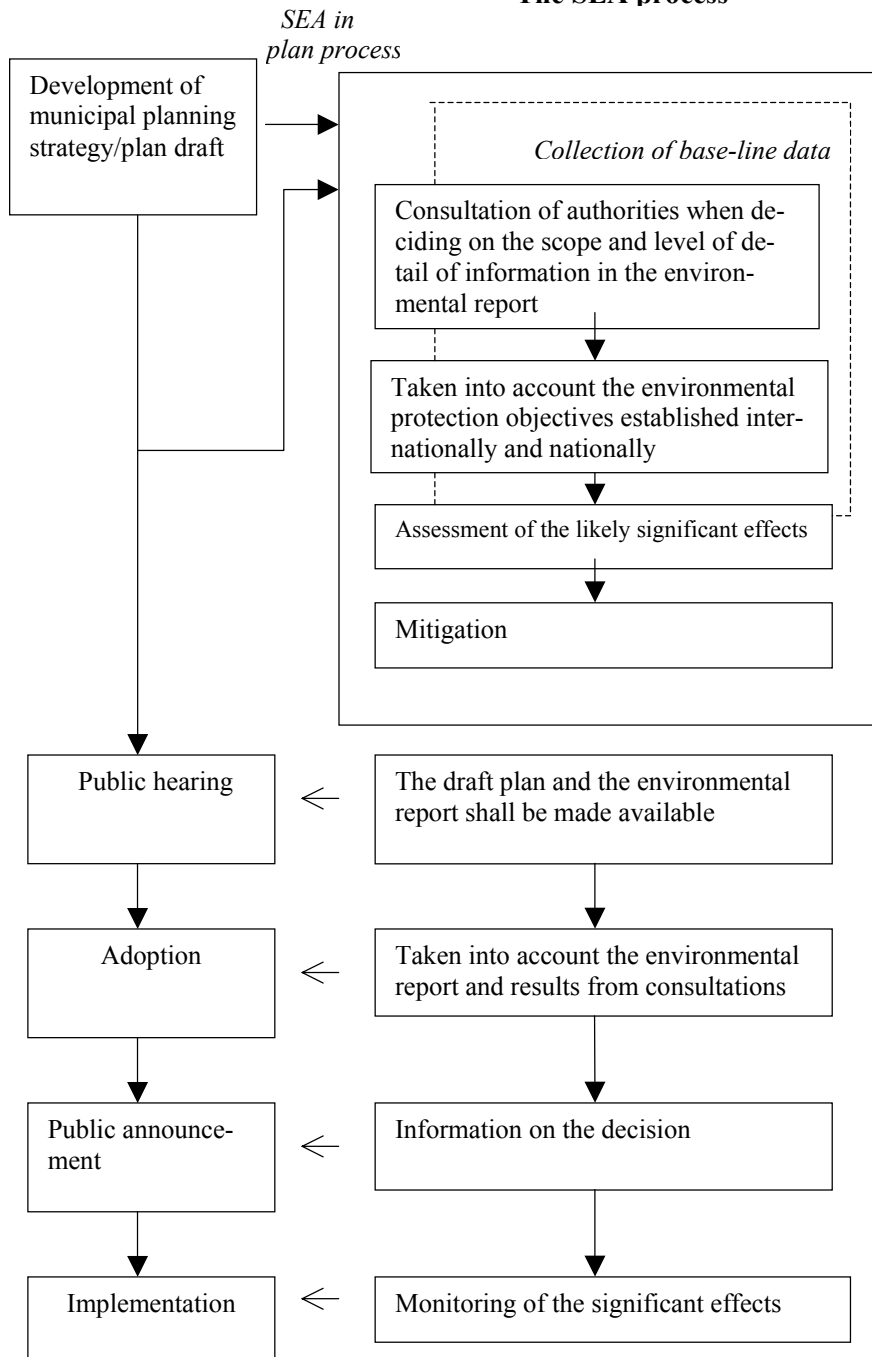
The ‘SEA in the planning process’ model was preferred in light of the following considerations:

- *That* the interests and understanding of the public for the municipal plan can increase when there is a joint process – not just by introducing new plans.
- That if an environmental assessment is to be the real basis for decision making it is important that the SEA begins as early

Fig. 1 Integration of SEA into a typical Danish planning process at the municipal level under plan development and after the draft plan is formulated. The draft plan can be a draft of the complete municipal plan or a draft of an area and/or subject plan.

**Planning process without
environmental assesment**

The SEA process



as possible in the process and/or is reintroduced in varying places in the process thereafter. It was reiterated that the SEA should be considered in the strategy for the plan, at the time when the politicians commit themselves to a goal for future development.

- *That* in respect of resources, the SEA should be integrated into the existing work.

Even though there is wide agreement that SEA should form part of the development of municipal planning, and that it should begin as early as possible in the process, an important consideration in this respect remains how the SEA will remain impartial assessment if it becomes a part of the process.

In accordance with the requirements of the directive, the environmental report must document the evaluation of environmental consequences, *for* mitigating measures, *for* involvement of alternatives and *for* monitoring. To this is added the requirement *for* documentation, *for* explanation as to how environmental considerations are integrated into the plan, *for* explanation as to how the environmental rapport and the comments from the hearings are taken into consideration, and *for* explanation as to why the plan is approved on the background of the considered alternatives.

These extensive requirements for documentation will support impartiality in the integrated process by increasing the transparency of the assessments and decisions taken.

SEA with and without an objective

We have chosen to distinguish between a ‘descriptive’ and a ‘normative’ assessment of the environmental consequences. By a *normative assessment* it is understood that the planning consequences are assessed in relation to the documented overall political objective for sustainability. A *descriptive assessment* is, on the other hand, based solely on a description of the potential consequences from the planning. This means that these consequences cannot be held up against sustainability objectives, which describe a desired direction for development.

The EU directive places substantial weight upon what we choose to call basic data as a basis from which to assess the consequences. Basis data covers (Annex 1):

- ‘The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan and programme.’ (0 – alternative)
- ‘The environmental characteristics of areas likely to be significantly affected’.

- ‘Any existing environmental problems that are relevant to the plan or programme’.

Even though the directive emphasises the descriptive assessment, where basis data plays an important role in the assessment of the consequences, it also points to the use of objectives in the environmental assessment. It is a condition that the environmental report displays ‘the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.’ (Annex 1).

The directive can, in this area, be understood as including a silent acknowledgement of the importance of an environmental assessment, where both baseline data and overall objectives are important to the assessment [Smith and Sheate 2001].

The descriptive assessment of the consequence of municipal plans is a part of the normative approach, which means that the use of the normative method supplies the descriptive assessment with an assessment of consequences in relation to the overall municipal objective.

Independent of the approach one chooses, municipalities can choose to supply additional sustainability factors in relation to the relatively wide environmental terminology in the directive, therefore covering the ecological, economic, and the social and the cultural sustainability objectives.

Environmental assessment without objectives: The descriptive assessment

- Assessment of the significant effects of the municipal plan
- Involvement of actors
- Public announcement of plan and environmental report
- Monitoring of significant effects

Environmental assessment with objectives: The normative assessment

- Identification and assessment of municipal objectives for sustainable development

- Assessment of the significant effects of the municipal plan
- Involvement of actors
- Public announcement of plan and environmental report
- Monitoring of significant effects

To what degree will the municipal plan contribute to sustainable development?

To what degree has the municipal plan contributed to sustainable development?

Fig. 2

Environmental assessment without objectives

According to the directive, implementation of the environmental assessment of planning means that an assessment of the significant consequences of the municipal plan is undertaken. It is based upon information on the likely significant impacts on the environment, including factors such as: Biodiversity, the population, public health, fauna, flora, the soil, water, air, climate factors, material goods, cultural heritage including architectural and archaeological heritage, landscape and the interrelation between the above factors.

Impacts should include secondary, cumulative, synergistic, short-, medium- and long-term, permanent and temporary, positive and negative effects [The European Union, June 2001, Annex 1].

As the above listing of the environmental parameters indicates, the directive covers a wide range of environmental terminology. These environmental parameters are, however, formulated as overall categories of environmental relations, which makes it necessary to define what is understood by each individual parameter and what has to be assessed. Assessment of biodiversity, for example, could be narrowed down to an assessment of the number and variety of different nature types, coastal area protection and the re-establishment of nature. To assist in this definition the previously discussed objective hierarchy includes an initiative for this task and in general is usual for municipal planning.

Besides the assessment of the consequences of the municipal plan with regard to the above-mentioned environmental parameters, it is also a requirement that a description is made of how environmental considerations and environmental protection objectives relevant to municipal planning have been considered – defined at an international level, in the EU or nationally. This requirement is closely related, as previously discussed, to what the normative SEA covers – an assessment of municipal planning's contribution to different objectives for sustainability.

Environmental assessment with objectives

The normative assessment includes consideration of the same issues as the descriptive assessment, but with an additional evaluation of the consequences of the planning compared against a checklist of defined objectives. With sustainability objectives as the starting point, SEA can thus contribute with systematic input to an estimation of to what degree municipal planning lives up to its objectives. One task of SEA then is to critically weigh up municipal planning objectives in light of the declared sustainability objectives, so that municipal planning can be improved and strengthened.

SEA performed with objectives (see previous figure) includes three stages:

- Stage 1: Clarification and assessment of the municipal objective for sustainable development.
- Stage 2: Assessment of the municipal planning's *expected contribution* to sustainable development.
- Stage 3: Assessment of municipal planning's actual contribution to sustainable development.

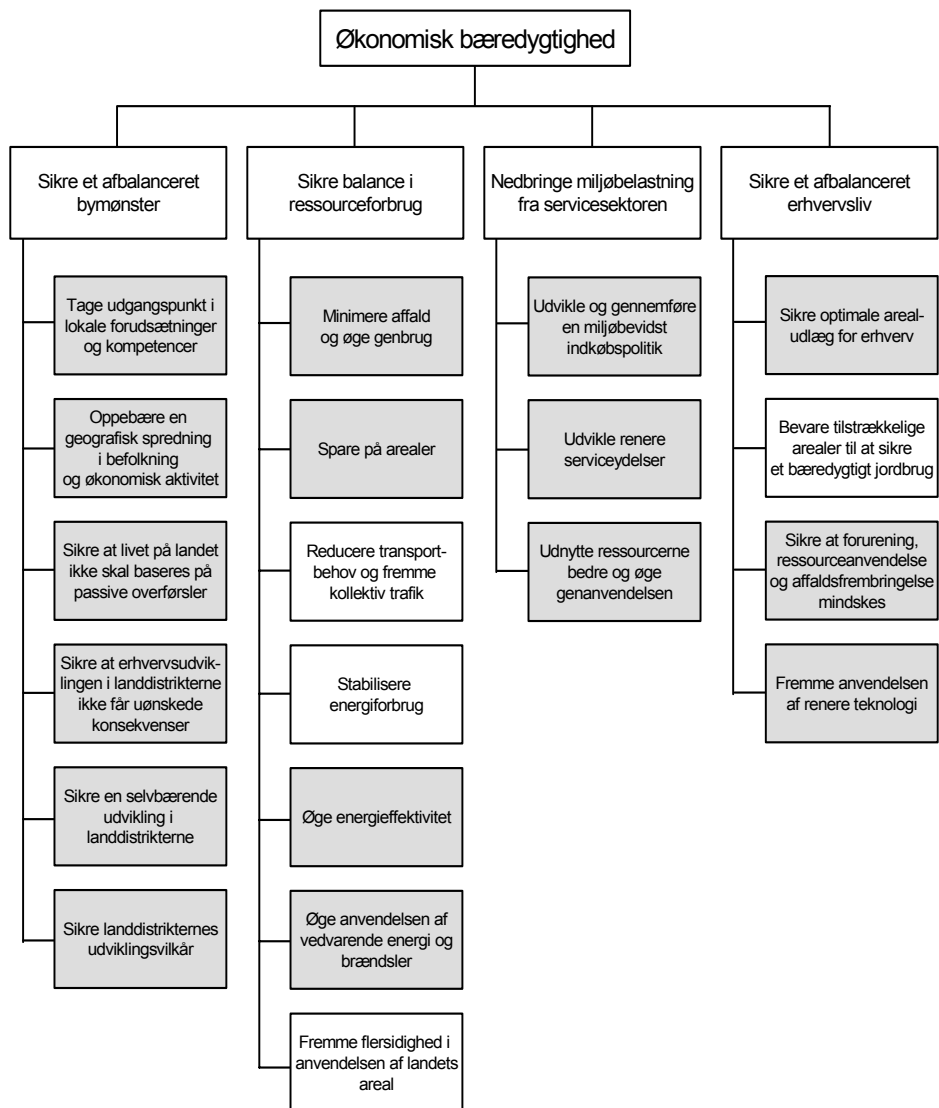
The first two stages are described in the following paragraphs. The third stage is described in part 6. Before proceeding further however we need an account of how sustainability can be substantiated into three objective hierarchies.

Determining sustainability objectives

In this section the starting point is the wide concept of sustainable development inspired by the Finnish national strategy for sustainable development. First we will look at the more traditional approach to sustainability with environmental protection and limitations to pollution – ecological sustainability. Then we will look at a sustainability approach that secures the balanced development of economical resources (raw materials, areas, energy, etc.) – economic sustainability. Finally we will look at a sustainability approach that ensures that everyone has his or her basic needs met (food, housing, education, work, participation, etc.) – social and cultural sustainability.

The three part-aspects of sustainability are put into practise in objective hierarchy. The arrangement of the objective hierarchy as a method of incorporating sustainability into municipal planning is based on two relations. The first is that an objective hierarchy helps to create an overview and secures consistency between overall objectives for sustainable development and the municipality's local objective. Secondly, each individual municipality can clarify the local sustainability objectives linked to the overall objective for sustainable development.

Fig. 3 Examples of the objective hierarchy of economic sustainability, and the degree of coverage for the small Danish municipality of Hvorslev. The grey fields include areas where Hvorslev's municipal planning or other planning documents are assessed to include objectives for effort:



The basis for the definition is found in Danish national announcements. In almost every area municipal activities are covered to varying degrees by parliamentary bills and national guidelines. On the one hand it is carried out via the requirement that certain possibilities shall be available to the public, or that municipalities shall undertake certain activities, while on the other via requirements about objectives and content for the defined activities. In this situation there is a focus on where, and to what degree, there are bills from Parliament and other governmental announcements, which lay down objectives for municipal activities and planning, and which of these objectives cover sustainable development.

For further clarification please see the report entitled, 'Strategic environmental assessment of municipal planning II – about sustainable objectives in municipal planning' [Hvidtfeldt and Kørnøv 2001].

The assessment of the local government objective for sustainable development (process)

As highlighted in the figure above, the first stage of the application of the normative approach to SEA is that municipalities define their objective for sustainable development – with either ecological sustainability exclusively as the starting point or with a wider approach including also the economic, social and cultural sustainability objectives. This assessment of municipal planning can take place in two rounds, which together form the assessment criteria.

First the municipal objectives are compared with the overall objective for sustainability in order to clarify:

- Whether the municipality has objectives that support the different national sustainability objectives?
- And if not – whether the municipality will clarify their policy for these areas and define the municipal objective? And whether the objectives are just as extensive as the national objectives?

The task then is to check to what degree municipal planning spans the sustainability considerations, and which criteria are relevant for the individual municipality concerned. This can ensure that nothing important is missed and in this way an important advance is made in getting the politicians involved in the plan for sustainability.

Then it is assessed if, and to what degree, the individual plan objective is:

- Precise, unambiguous, understandable, realistic and committing.

To what degree an objective can be regarded as realistic will vary from municipality to municipality, dependent for example upon the municipalities' location, economic base and the structure of the population.

To what degree an objective can be defined as 'committing' for a municipality depends, for example, upon how detailed it is, if they include concrete suggestions or recommendations, and are relative to the resources from the municipal budget.

Objective hierarchy is thought of as a tool to be used by municipalities to assess the degree to which the municipality has planned objectives, or not as the case may be, for each of the individual sustainability themes – and thus it should function as a dynamic tool. The hierarchy in this case is thought of as an initiative to illustrate, and thus should not be thought of as a final offer with all relevant background sustainability objectives in respect of future municipal planning. This means that municipalities can take the hierarchies as a starting point and supply them with the additional objectives that they find relevant.

Hvorslev Municipality has applied the objective hierarchies as it was meant to, and has subsequently expanded them further to include local conditions, wishes and objectives. [Lykke 2002].

The expected contribution of the plan to sustainable development

Only when the definition and assessment of municipal objectives for sustainable development are in place is it possible to undertake an assessment as to what extent municipal planning can be expected to contribute to sustainable development.

The directive requires an assessment of the specific item of planning's most important effect on the environment, including reference to issues such as biodiversity, population, human health, fauna, flora, etc. (Annex 1).

The sustainable hierarchy involves a definition of these factors together with an explanation of them, as it includes sustainability objectives concerning the economy as well as social and cultural relations.

The notion of hierarchy can be used in the normative SEA process by asking the question: to what degree will municipal planning contribute to sustainable development? The basis for undertaking this collective assessment of municipal planning is that each planning objective and each frame is assessed with the help of criteria that are chosen to facilitate the monitoring of objectives.

Quantifying the expected consequences will not always be possible. Today environmental assessment is known primarily from the project level within the context of regional EIA work. These types of environmental assessments are often very specific in their manner, quantifying a

given project's expected environmental impact. The same degree of detail and use of quantities in data terms is not expected – nor would it be a sensible use of resources – in relation to environmental assessment of both municipal and regional planning. This is linked to the character of planning.

First municipal planning is relatively abstract, and there are still many decisions to be made after the municipal planning is approved and an environmental assessment has been performed before the contents of the planning are executed in practice. In other words, municipal planning is continuous. It is therefore not possible to know the details of the exact implementation of municipal planning activity beforehand – and thus it is not possible to determine the exact environmental affects of such activity.

Secondly municipal planning has a long time perspective. This means, among other things, that many issues of importance as regards the completion of a municipal planning project can change. It could for instance be that one receives new knowledge of existing environmental consequences, or that public and/or political opinion changes radically, or even that changes in parliamentary bills, etc occur during the ongoing period of the planning process.

Thirdly, there are many parties involved in the completion of a specific planning measure – other than the municipal authority, that originally formulated it. It is therefore highly unlikely that the original planning measure will be implemented precisely as intended.

In summary, the time after approval is given to an act of municipal planning can be characterised by the fact that much uncertainty remains in connection with the actual completion of the objective and framework, and that many more specific and detailed decisions remain to be taken. The relevance of the fact that a lot remains to be clarified after planning approval is given is that it is often neither possible nor beneficial to undertake an environmental assessment of all of the potential consequences and alternative details.

Additional conclusions of the workshop

The overall objective of municipal planning is that it shall enhance sustainable development. Municipal planning considers the municipality from an overall perspective, and sets objectives and frameworks for how, among other things, the physical environment should be administered, changed and developed – within the context of a long-term perspective.

Municipalities have a decisive role in relation to environmental work. In their planning they define their environmental objectives, and what is necessary for the enhancement of development with respect to these objectives. Municipal planning can handle environmental questions

together with questions concerning the economy, as well as social and cultural relations.

In the context of this background the model with involvement of objectives for sustainability was not unfamiliar to the workshop participants. One conclusion emerging from the arrangement was that SEA should be normative, i.e. conducted with overall objectives as to how the individual municipality wished to be developed.

Among others, the following possibilities were pointed out:

- SEA can contribute to municipal planning by being targeted and secure in the vision that the public is included in the discussion about development in the municipality.
- SEA can support the individual municipality in defining what is meant by sustainability.
- SEA can contribute to the drive to better integrate sustainability in future into municipal planning, where today, sustainability is often considered on a single-issue basis.

It was however at the same time emphasised that it should be up to the municipalities themselves to decide upon their own levels of ambition and thus to decide which model they should work with.

This also counts in relation to deciding if they should work with a wide or a narrower focus in relation to the terminology of the directive on sustainability.

Monitoring developments

The directive requires, as previously described, monitoring of the significant environmental parameters from the completion of plans and programmes. In relation to the directives the objectives are, for example:

- To be able to identify unforeseen negative environmental effects at an early stage.
- To be able to draw sensible helpful mitigation measures.

The systematic monitoring is in this way an addition to the undertaken assessment of municipal planning's potential environmental consequences. Monitoring follows planning implementation and gives information on the actual environmental conditions and development.

Monitoring includes the gathering and analysis of information concerning environmental effects and the subsequent decisions as to what should be undertaken.

The task of monitoring

When municipal planning is formulated and approved, detailed and precise knowledge as to the consequences of such planning are very limited. In general, qualitative information is mainly available. This is because, as was previously discussed, the actual planning, and the subsequent process of environmental assessment is relatively abstract, such that many relations still need to be defined and explained, while there are many parties and interests involved in the process and thus it may take some time before the actual planning is implemented and thus has environmental effects. The consequence of this is that there may be significant differences between, on the one hand, the original plan and its political objective, and what actually happens on the other.

Monitoring of the municipal planning's environmental effect can in this connection satisfy several objectives:

- To supply updated information on the environmental situation developing a further basis for decision making in order to consider the important relations in relation to the next planning revision, i.e. to provide information that can be included in the planning strategy.
- To identify the negative environmental effects that require ratification.
- To help ensure that the ratification measures, as suggested in the SEA, are completed.
- To have a better knowledge of the situation so as to be better able to undertake environmental assessments in connection with the next municipal planning revision.

If a normative environmental assessment is undertaken, monitoring will subsequently satisfy the objective:

- To check to what degree the municipal planning actually supports a sustainable development.

This last objective is explained further later in this section.

Monitoring and the planning process

Municipal planning is a dynamic and iterative process, where updated information is of great importance. By coupling monitoring with the planning process the knowledge gathered through monitoring can be used in a possible planning revision. This is true also in connection with the development of the plan strategy and also with the environmental assessment.

It is recommended that a summary be made of the updated monitoring that will give politicians, officials and the public a better overview of the municipal environmental situation and development. Such a summary and reporting measures are not requirements of the directive, though it is considered to be of particular relevance for both politicians and the public that a summary is made publicly available.

With respect to the gathering of data for monitoring, data gathered for other purposes could be used. For example traffic figures in connection with traffic safety planning, or water usage figures in connection with water supply, etc.

This existing monitoring should, where possible, be used in connection with SEA to avoid additional or duplicative work. In most municipalities however it will be necessary to carry out further data collection, as it cannot be taken for granted that existing monitoring data will be available nor that it will be reported in a form such that the information can be gathered and used directly in relation to the SEA process.

Using indicators in connection with monitoring

An important question in this regard is: what should the monitoring include? With regard to resources it is not realistic – or sensible, in terms of achieving an overview of the data – to undertake monitoring of all the environmental relationships in a municipality. One possibility then is instead to select important parameters in the form of indicators. In the environmental field indicators are being used in an increasing number of instances as tools to maintain an updated understanding of the condition of the environment and therefore provide the possibility of better political steering. The main functions of indicators can be split into three: simplification, quantification and communication [Høyer and Aall 1997]. First, simplification, as indicators represent complex environmental relations and therefore also make it possible to monitor a limited number of environmental parameters. Second, through simplification it is possible to quantify relationships. Third, indicators may bring about easier communication concerning environmental relations both for the authorities and for the public in a municipality, and also between municipal officers and politicians.

Summing up it can be said that monitoring with the help of indicators shall help to give an understanding of [Kørnøv and Christensen 2002]:

- Where you are
- Which direction you are moving in
- How far you are from your objective.

Even though several indicator models and sets of indicators exist it is still a challenge to choose specific indicators for monitoring. It is important to be aware of the fact that no 'perfect' indicators exist, only indicators that highlight important aspects for the individual municipality [Hvidtfeldt and Kørnøv 2001]. Furthermore: '...an indicator can be, or will often be, a narrow demarcation regarding the environmental issue it is chosen to highlight, and most likely there can be a number of significant consequences or side effects that are not highlighted. Moreover, the question remains as to what changes the indicators actually include for the environmental area that the indicator shall describe and what the eventual influence they will have on the selected environmental area. The main function of an indicator is to simplify the description of, for an example, environmental connections and developments. The level of simplification depends upon the choice of indicator type. If one chooses a larger number of specific indicators, such as e.g. a CO₂ measurement to describe CO₂ emissions, the simplification is obviously least. This can be seen in relation to choosing relatively few so called 'key indicators', where simplification and insecurity is larger [Høyer and Aall 1997]. A key indicator is for example the number of partridges as expression for the general natural state in Denmark. This balance between reaching a clear information base and at the same time securing a substantial and covering quality is important to be aware of in choosing and using indicators? [Hvidtfeldt and Kørnøv 2001].

Monitoring with and without objectives

In a situation where it has been decided that an environmental assessment without objective will be undertaken, the task of monitoring will be to serve the expected purpose – but without monitoring being used as a basis for systematic assessment to determine to what degree the municipal objective for sustainable development is achieved over time.

As such we see the ongoing measurement of the conditions of selected environmental parameters, and thus how the environment develops. Indicators can be used for this purpose

This provides information to municipal officers and politicians, who can then use it as a basis for consideration, in terms of considering to what degree existing planning is satisfactory and where an additional effort might be necessary to change a negative course, or to support a positive course further. Similarly such information gives the public the opportunity to evaluate the effect of municipal planning.

To help with the task of monitoring 'with objective' the previously discussed sustainability hierarchy can be used. The objective here is to answer the question: to what extent has the municipal planning contrib-

uted to sustainable development? This means that the choice of indicators to be used for systematic monitoring are linked to the overall municipal objective, formulated from either a narrow understanding of sustainable development or from a broader understanding including the environment, the economy and social and cultural relations.

To make the monitoring of objectives possible, the municipal (sustainability-) objective is specified in the form of indicators. This is in line with recommendations from the committee for renewing municipal planning. In their report from 1999, the committee recommends that the political objectives should as far as possible be concrete, measurable and cohesive for the following assessment if the objectives are to be met [The Ministry of Environment and Energy 1999, page 67].

Areas with need for further research and testing

As regards the future implementation of the Directive, and thus in respect of SEA in planning more generally, it is possible to point to several areas where more research and practical testing are necessary. We have thus chosen here to focus upon four areas in particular where it would seem to be beneficial to carry out further testing and evaluation.

One area in need of further knowledge and experience gathering is that of the development and use of alternatives in SEA work. According to the directive 'reasonable alternatives' should be taken into account – with regard to current knowledge and methods of assessment. An outline of the reasons for selecting the alternatives dealt with and the reasons for choosing the plan or programme as adopted in the light of the other reasonable alternatives dealt with is required. The directive makes it necessary to clarify how 'reasonable alternatives' should be understood. Part of this clarification can be that the alternatives have to be technically and economically possible to implement as well as timely. Besides clarifying when, and to what extent, alternatives should be assessed there is also a need to clarify how alternatives can be developed, formulated and assessed.

Another area in need of discussion is that of the use of indicators in the SEA. Using indicators can be beneficial, but also problematic. In the Danish context the experience of indicator use in planning is still limited, so when choosing indicators it is important to be aware of the following questions:

- What is a good indicator? This can be assessed with regard to scientific validity, level of aggregation, understanding, significance, measurability, and practical opportunity for data collection.

- Who shall choose the indicators? If the indicators are not chosen from a common understanding of their importance there is a risk that they will be ignored.
- How many indicators shall be chosen by each municipality?
- Is it always possible to use the same indicators for both the monitoring of actual states of the environment and for assessing the potential impacts?
- How often must data be collected?

A third area in this regard relates to knowledge and experience with the various types of organisational structures used for undertaking SEA. Indeed, this area has attracted least attention in the international research already undertaken on SEA [Kørnøv 2002]. There is though a general acceptance that it is not possible to develop universal procedures for undertaking SEA. Knowledge of the existing planning processes, knowledge of decision-making processes, and of the culture of a single organisation are thus all important, in terms of being able to choose an implementation method that will ensure that the SEA process actually influences planning. Several models for organising SEA work are possible, such as where the SEA is done by an independent, internally appointed, group – a group consisting of a fixed number of people supplemented during the process by others from the organisation with different and necessary competences, by the single departments, by the central administration, by external consultants solely or by the authority in co-operation with consultants about a subject or about the SEA-process.

A fourth and final area in need of further discussions and clarification, is that of the role of the public and of the politicians in the SEA process. According to the directive, the public needs to be involved when a draft plan or programme and an accompanying environmental report are written. This involvement though is often viewed as coming relatively late in the process and of being limited in nature. There are though examples to be found of processes which have seen earlier and more comprehensive involvement by the public – e.g. in connection with the formulation of the overall municipal objectives for sustainability and also in relation to the SEA. We could also point in this regard to experience with public involvement in the monitoring of the state of the environment. In the same way, politicians can play a more or less active role in the SEA process.

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Key issues in Strategic Environmental Impact Assessments

Finnish experiences¹

Mikael Hildén and Pauliina Jalonen

Introduction

Finland introduced a general requirement to assess the environmental effects of policies, plans and programmes in the EIA Act of 1994. The requirement to carry out assessments of policies, plans and programmes is limited to one Section in the Act (Section 24). The Act does not specify how they are to be carried out, but the Ministry of the Environment and the Council of State have subsequently issued guidelines on the assessment of policies, plans and programmes and bills respectively (Ministry of the Environment 1998, Council of State 1998). In addition, the Ministry of the Environment has funded a development project aimed at supporting authorities in carrying out environmental assessments. The Land Use and Building Act of 1999 also emphasised the requirement to carry out environmental assessments of land use plans. Brief statements on the need to assess environmental effects can also be found in other Acts, e.g. the Act on Regional Development (1135/1993).

These activities have led to a number of environmental assessments in different branches of the administration. The land use and transport sectors have taken an active role in developing SEA, whereas e.g. agricultural and rural authorities have been more passive. In this paper we address some questions arising from the assessment experiences. Questions of particular interest are the following:

- What are the specific challenges that arise during the assessment process?
- What similarities and differences do we find in the assessments from different branches and levels of administration?

¹ This is an expanded and revised version of a paper submitted to Nordregio as 'From Idea to Practice – key issues in Finnish strategic environmental impact assessment'.

- How do assessments related to land use planning differ from other assessments?
- Is there scope for standardisation of procedures and/or methods?
- What do these assessments tell us about the challenges of implementing EU Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, i.e. the 'SEA Directive'?

Background on information and methods

The material for this study consists of data on almost 20 assessments (Table 1), which vary in scale and expenditure of resources and come from different branches and levels. The examples discussed here illustrate both 1) the assessment of policies, plans and programmes developed without procedural requirements and 2) the assessment of land use plans which are part of a preparatory procedure regulated in detail by the Land Use and Building Act (132/1999). This provides material for an interesting comparison and will be a theme pursued throughout the paper.

The assessment of bills has been excluded, as this has to be incorporated into the procedural requirements of the preparation of Government Bills, though a general comparison between assessments of policies, plans and programmes and those of bills will be made. There are however obvious links worth noting: many policy documents lead at a later stage to bills and hence the quality of the assessment at the policy stage will influence the assessment of the bill in question.

Although the sample is not statistically representative of the Finnish SEA experience, the analysis does include a number of important case examples. It is based on a systematic reading of the assessment documents, on interviews with the persons involved and in some cases on external reviews of the assessments and their use. Data on land use planning was further obtained in phone interviews with regional environmental authorities. Follow-up studies made by the Ministry of Environment and the Association of Finnish Local and Regional Authorities on their experience of the Land Use and Building Act of 1999 were used as secondary sources.

The cases aim at illustrating the diversity of issues and to identify some frequently occurring issues and problems. Of the authors Mikael Hildén has been personally involved in some of the assessments (see Table 1). For these assessments, the analyses are also based on notes made during the SEA process and on the draft assessment reports.

Table 1. Material (assessments and other) reviewed for this study

Transport

- Nordic triangle (transport infrastructure along Finland's southern coast)
- Helsinki Metropolitan Area Transport Plan 1998
- Guidelines for Road Management and Development 2015
- Intermediate Term Road Management Plan for Savo-Karjala district 2000-2010
- Rail network 2020 Programme

Resource management

- National forestry programme*
- Programme for renewable energy
- Resource management and areal ecology plans of the National Forest and Park Service

Regional development

- Structural Funds Programmes for western Finland 2000-2006, southern Finland 2000-2006 and central Finland 2000-2006

Environment and nature protection

- Energy conservation programme
- National Climate Strategy*
- Finnish Natura 2000 programme*

Land use²

- National objectives for land use
- Uusimaa regional plan
- Kirkkojärvi, partial master plan, Kangasala municipality
- Follow-up studies made by the Ministry of Environment and the Association of Finnish Local and Regional Authorities on the experience from the Land Use and Building Act of 1999.³
- Phone interview with 10 land use planners in regional environmental centres, September - October 2002

* Asterisks denote assessments in which M. Hildén has been personally involved.

² The assessments do not include local detailed plans.

³ Ympäristöministeriö (2002). Maankäyttö- ja rakennuslain toimivuus. Arvio laista saaduista kokemuksista.

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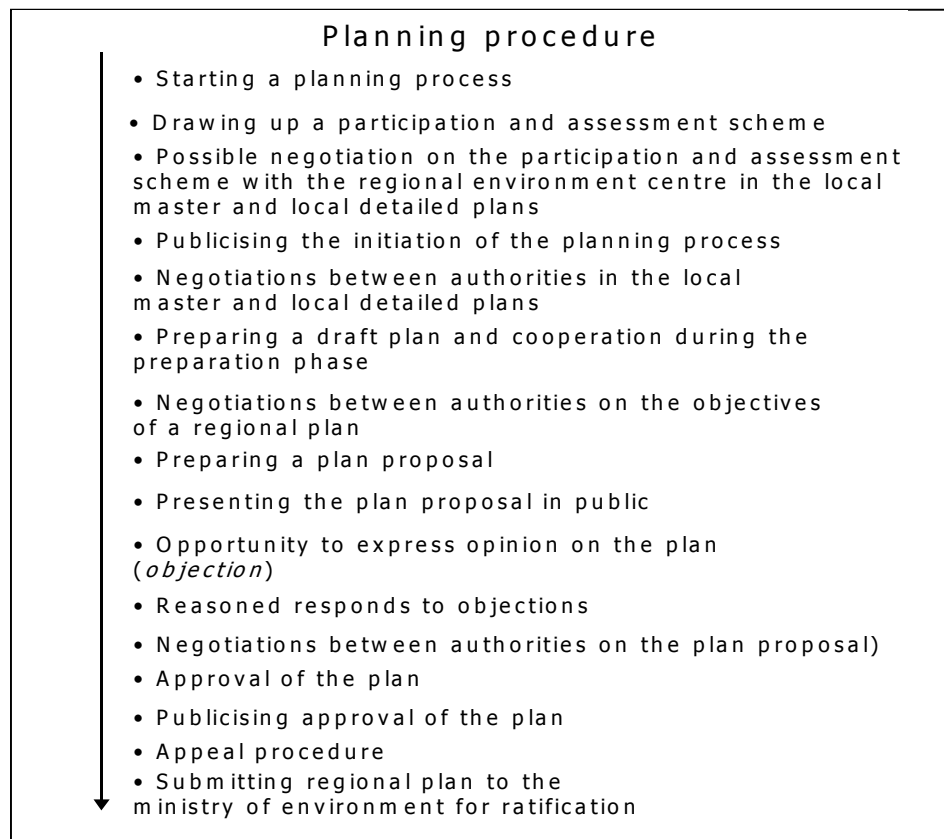


Fig. 1. Planning procedure in land use according to the Land Use and Building Act.

Coverage

The EIA ACT and the Directive (2001/42/EC)

The Finnish EIA Act (Section 24) requires that an environmental assessment be made for all policies, plans and programmes that may have significant effects on the environment. The authority responsible for drafting the policy, plan or programme is responsible for determining the need for an assessment. In retrospect, it is evident that all of the policies, plans and programmes examined here meet the criterion of 'possible significant environmental effects'. An interesting question is whether they would also have been subject to assessment under the requirements of the SEA Directive (2001/42/EC).

According to the SEA Directive two key conditions have to be met to make the directive applicable. The plan or programme has to be based on law, decree or administrative order and the plan or programme should 'set the framework for the consent of projects'. The legal basis and the setting of framework are crucial questions for determining whether a proposal is subject to assessment.

A strict interpretation of the legal basis could mean that only plans and programmes that have been explicitly mentioned in legal documents would qualify. Such an interpretation would exclude e.g. the general guidelines for road management and development from the assessment obligations according to the SEA directive. A broader interpretation would recognise also general planning obligations and subsequent administrative decisions as a sufficient condition for a plan or programme to be dealt with according to the SEA directive.

A strict interpretation of the concept of 'setting framework for development consents' would similarly exclude several assessments reviewed here, for example: the national forestry programme, which represents a policy paper aimed at guiding general policies; the energy saving programme, which provides some funds for development work, but which does not deal with consent procedures; and the guidelines for road management and development 2015, which outlines the long term policy of the Finnish road administration.

Interestingly, the national climate strategy, which is primarily a policy paper, would qualify for assessment in accordance with the Directive, since it contains an explicit statement on preparation for a prohibition on building new coal fired power plants.⁴ This particular measure was introduced in the course of preparing the climate strategy. The national land use objectives are also a general expression of the land use policy and generally do not *stricto sensu* set the framework for projects. However, there are also elements that have direct interpretations at the level of projects (Auvo Haapanala, Ministry of the Environment, pers.comm.). These examples show that strategic policy documents can qualify for assessment according to the Directive although they may initially have been intended to be policies that lie outside the scope of the Directive. Possibly, the in-

⁴ It could still be argued that the National Climate Strategy would have been excluded from the scope of the SEA Directive, because it is not required by legal or administrative provisions, but was based on a Government decisions to start preparing such a document. It could, however, be argued that the Government's decision was an 'administrative provision' which required e.g. sector Ministries to carry out the preparatory work for the National Climate Strategy.

interpretation of the concept 'setting framework' could become broader than that envisioned in the negotiation process leading to conclusion of the Directive. The broadest possible interpretation could include any proposal that contains aspects that will be explicitly referred to in the consent procedures of individual projects. With such an interpretation, practically all the policies, plans and programmes examined here should be assessed according to the Directive. Even under a narrower interpretation of 'setting framework for consent procedures', the guidelines for road management and development 2015 could be subject to an assessment as they outline what kind of projects will be prepared in the future. However, the guidelines and many other similar documents could be excluded from the scope of the directive on the grounds that they are not based on 'administrative provisions' or any stronger legal document but instead on adopted administrative practice. Thus the requirement of the Finnish EIA Act on the need to assess policies, plans and programmes is clearly broader than the formal scope of the SEA Directive.

Although with hindsight it is obvious that the assessments had to be carried out according to the Finnish EIA Act, this was not clear when the preparatory work was initiated for the policies, plans and programmes examined here. Even the environment sector, represented here by the national *Natura* 2000-programme, initially opposed the idea of an assessment on the grounds that assessments are necessary only for those policies, plans and programmes that may have adverse effects on the environment. The same arguments were also echoed in the preparatory work for the SEA Directive. After long discussions the idea of an exclusive focus on 'adverse' effect was rejected, because the broad definition of 'environmental effects' can mean that there are effects that can be simultaneously adverse and beneficial depending on the viewpoint. A simple example is an agricultural programme that supports the conversion of fields into forests. It may be beneficial from the point of view of control of non-point source pollution of waters, but adverse from the point of view of protecting biodiversity.

In Finland the preparation of legislative amendments to accommodate the Directive was initiated in 2002. For the work the Ministry of the Environment has appointed a special *ad hoc* group, the 'SEA working group' with representatives from all key ministries, the regional environmental centres, the Finnish Environment Institute and the Association of Finnish Local and Regional Authorities. As a part of the national implementation of the SEA directive, an overview of the public policies, plans and programmes in Finland with 'possible significant environmental effects' was prepared for the SEA working group. Responses from the re-

sponsible authorities have indicated that the implementation of the SEA directive would tend towards a narrow interpretation on ‘setting framework for’⁵ and would also tend towards the use of criteria based on the definition of plans and programmes to restrict the scope of the application of the SEA Directive. At the same time unanimity exists over *maintaining the general assessment requirement for policies, plans and programmes in the EIA Act*.

Land use plans

The land use plans clearly fall under the SEA directive. They also differ from the other policies, plans and programmes reviewed here in that the *Land Use and Building Act of 1999 explicitly specifies a requirement to carry out environmental assessments of land use plans and also includes a specific procedure* (Fig. 1). The objective of the Act is to develop open and interactive planning processes.

The environmental assessment requirement covers the regional land use plans, local master plans and the local detailed plans. A strict interpretation of the Directive’s concept of ‘setting framework for development consents’ could exclude the national land use objectives examined here, but as noted above they can also be seen to set the framework of certain projects although the bulk of the objectives is a general expression for the land use policy. The national objectives are supervised at a general level by the central government and by regional environmental authorities at the regional level.

The Land Use and Building Act requires the Government authorities to take national land use objectives into account, promote their implementation and assess the impact of their actions on local structure and land use (Section 24, The Land Use and Building Act). A similar obligation to assess the regional impacts of government’s actions is included in the Regional Development Act. There are also links to road planning. In 1999 the Road Act was revised by strengthening this link between road planning and land use planning. The Road Act now includes an explicit demand that road planning must be harmonised with land use planning and also with the national land use objectives (Road Act, Section 10; 133/1999).

In regional planning and other land use planning, national land use objectives must be taken into account (Fig. 2). For regional planning national land use objectives are mentioned as a contents requirement in the Land Use and Building Act. As the Ministry of the Environment ratifies regional plans (Land Use and Building Act, Section 31), the ratification is

⁵ About the discussion see Hildén & Valve (2001).

also a form of 'supervision'. For more detailed planning the supervision for implementing national objectives is indirect as there are no direct legal links between the national objectives and local master and detailed plans. The regional plans work as a steering mechanism in implementing national objectives on a local level. When the local master plan is being drafted, consultations have to be held with the Regional Environmental Centre, which ensures that national objectives are taken into account in local plans.

According to the 1999 Act, municipalities have a central role in planning with responsibilities for local master plans and local detailed plans. Regional Councils draft the regional land use plans. In 2001 there were 448 municipalities and 19 Regional Councils in Finland. Planning practices that apply the Land Use and Building Act are only taking shape and at the end of 2002 there were no plans (regional land use and local master plans) completed according to the new Act. There were however about ten regional land use plans and dozens of local master and detail master plans under preparation.

Within a municipality, the local master plan is an instrument for guiding and coordinating land use at a general level. The municipality can choose whether it is kept as a general strategic plan without legal effects or developed as a more detailed one for the direct regulation of building, depending on the need (Land Use and Building Act, Section 45). If it is kept as a general strategic and development plan it has no immediate legal consequences. For example, a municipality has no duty to expropriate or pay compensation. A master plan with legal effect has consequences for other planning and authorities' activities. A local master plan may e.g. order restrictions on building and actions. A local master plan can also be a partial master plan, and its legal consequences can be partial. Land use planning – or building – of shorelines is also covered with a legally binding local master plan or a local detailed plan.

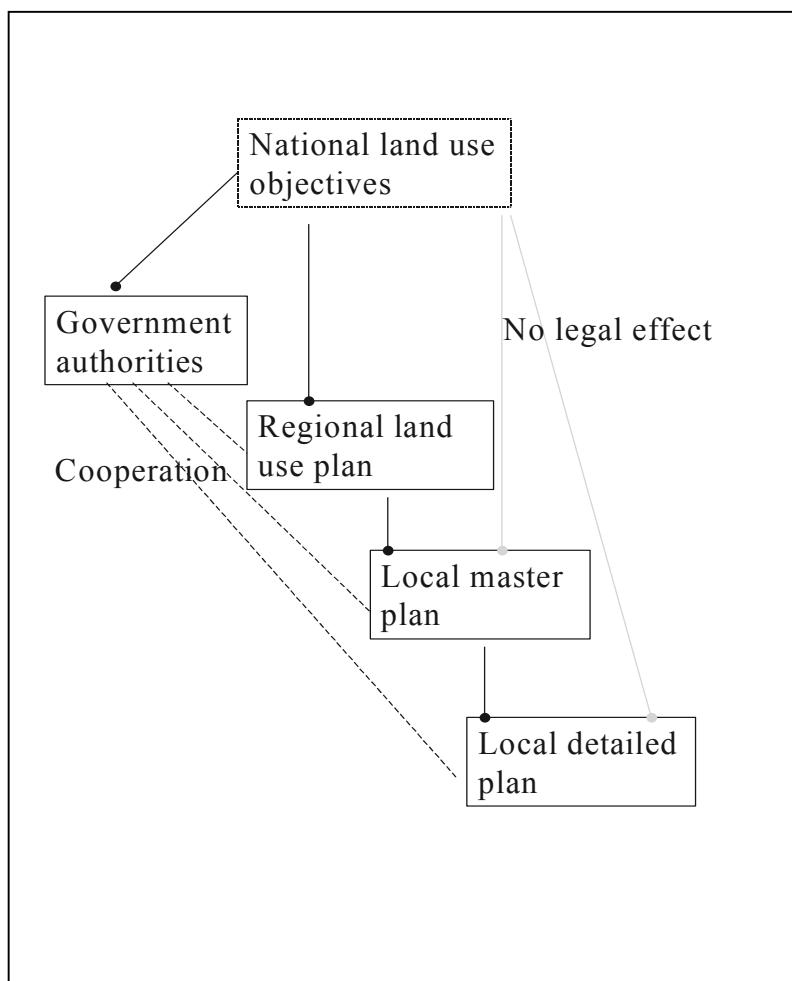


Fig 2. Implementation of national land use objectives

The Land Use and Building Act also includes other instruments for dealing with urban development policy. Large urban areas are given the opportunity to draw up ‘joint master plans’ (by the end of 2002 decisions had been made on three joint plans), and local authorities are able to establish ‘development areas’ which will be targets for special public support for housing, business and industry (by the end of 2002 five municipalities had decided on establishing such areas).

Observations on features of SEA practice

The following discussion of Finnish experiences focuses on eight key features of SEA practice, which also roughly accord with the headings of the Articles in the SEA Directive. The findings are organised in order to facilitate comparison with the changes that are likely to occur as a result of the implementation of the Directive.

Timing

Arguments about the need to carry out an assessment delayed the initiation of the process in several cases. Other delays in this regard were caused by arguments over whether or not an assessment can be made before a policy; plan or programme is available, at least in draft form. In the examples listed, this line of argument was presented in the national forestry programme. In this case, the programme progressed all the way to decision-making at the Council of State level, when the Chancellor of Justice ordered an assessment to be completed before the programme was finally approved.

Various problems were encountered in the cases in which the start of the assessment was severely delayed relative to the other preparatory work. In some cases, the credibility of the planners had been severely questioned and this was channelled into strong opposition against the whole plan. The *Natura 2000* programme is an example of this type of problem. In other cases, the assessment results were used to a limited extent, because too much prestige had already been built into the programme as drafted before the assessment. The National forestry programme is an example of this.

There are also examples of policies, plans and programmes where the assessment work started simultaneously with the other preparatory work. The energy saving and energy efficiency programmes included assessments that were part of the preparatory process. The Finnish Forest and Park Service have also included assessments as an integral part of resource planning. Moreover, the Ministry of Transport and Communication and the Ministry of Environment, in more recent policies, plans and programmes, have respectively moved toward and recognised the usefulness of initiating assessments simultaneously with the other preparatory work.

The early initiation of assessment, simultaneously with other processes, does not mean that all problems will be avoided. Other issues remain from an assessment point of view. Notably, the question of integration between environmental assessment and other preparatory work still needs to be addressed (see below).

For land use plans the question of timing has, in principle, been solved already at the level of legislation. The Land Use and Building Act requires a specific participation and assessment scheme to be prepared at the beginning of the planning (Fig. 1). The scheme should state the most central effects to be assessed. In the Uusimaa regional land use plan some preliminary assessments were made to provide information for the draft plan. In Kangasala the assessments were integrated into the generation of planning alternatives. In follow-up studies on the implementation of the new act the late notices on assessment needs have been considered as a significant problem.

The long preparatory and approval processes are a distinct feature of land use planning. For example in the Kangasala case the planning process started in 1996 and appeal procedures still continue (autumn 2002). The Land Use and Building Act of 1999 has simplified ratification procedures relative to those of the previous Building Act and it was expected to speed up the planning process. There is no data on the effects of the new Act on the duration of planning processes⁶. However, the planners in the large municipalities have felt that uncertainties in some aspects of the new Act have slowed down the planning processes. It is unclear what 'sufficient studies, impact assessment and participation' mean in practice. One of the interviewees was worried about 'the future of planning if the solution to provide sufficient participation possibilities and keeping planning processes relatively short can't be found'.

Tiering

According to a the 'textbook', policies, plans and programmes can be seen to form a clear hierarchical structure in which higher tiers direct the lower ones. In reality, this picture is blurred. First, there are policies, plans and programmes at several hierarchical levels, from the supranational (European Union) to the local (municipal) level. Second, the 'top down' direction may be reversed and programmes, or even certain large-scale projects, such as those for harbours or nuclear installations may begin to drive the plans and policies. The picture is further complicated by the fact that local policy may have starting points that differ from, for example, those of national policies. Indeed, the local implementation of a national policy is clearly a political activity that affects the interpretation of the policy.

Thus, the tiering of assessments is not a simple technical exercise. In this regard, the requirement of Article 4(3) of the Directive, namely that

⁶ A study on local detail plans has shown an average of 23 months of preparation without the appeal procedures. Regional land use plan and local master plan processes are usually considerably longer.

'Member States shall, with a view to avoiding duplication of the assessment, take into account the fact that the assessment will be carried out, in accordance with this Directive, at different levels of the hierarchy' is open to interpretation. For example, regional development programmes should reflect policies agreed upon at a supranational level. Yet, assessments of supranational and national regional policies related to the use of structural funds have been virtually non-existent.

Instead, there has been tiering within the region and links to other plans and programmes that have direct implications for an assessment. For example, Agenda 21 programmes and municipal policies have been used as a reference, since the driving force in the development of regional programmes is the regional council, which in Finland is formed by municipalities, i.e. a 'bottom-up' structure (Ministry of the Interior/Ministry of the Environment 1999). However, funding is channelled through regional government authorities, which represent a 'top-down' structure. These conflicting pressures have to be taken into account, although they do not represent an orthodox view of what tiering is about. Avoiding duplication in data collection is relatively easy, but the main issue and the time consuming phase of assessments relate to the discussions that take place in the preparation of the policy, plan or programme when several discussions will be 'duplicated'. This appears to be unavoidable, given the nature of the planning task.

Land use planning has incorporated a vertically tiered approach to SEA. In horizontal planning there should be links between regional scheme, regional development plan (without procedural requirements) and regional land use plan (with procedural requirements), thus far however there is no experience of the success of such tiering. In the Uusimaa case the objectives of regional land use plan and regional scheme were discussed together with the wider public. After the discussion the regional scheme was prepared behind closed doors within the administration, whereas the land use plan included wide public participation. The interviewees noted that alternatives would have been needed when the regional scheme was drafted, but no alternatives were, however, specified.

In transport planning, the tiering principle appears to be closer to the textbook case than in many other sectors. The Ministry of Transport and Communication has a key role at the policy level and these policy lines are transmitted to the administrations for the different transport sectors. A break occurs, however, when one reaches the municipal level, and, in particular, urban areas as shown by the transport plan for the Helsinki metropolitan area. Here local and national policies meet, not as well struc-

tured tiers, but rather as partly competing views that struggle to influence the development (Kaljonen 2000).

A particular example of the difficulties related to tiering is the linking of land use planning and transport planning. Establishing working links is complicated due to the separate traditions and planning paces in these sectors. This was clearly to be seen in the Uusimaa regional land use plan. In addition, a development project aiming at the integration of the land use planning and the transport planning failed to produce enough interaction between these processes. In practice, planning was guided either by the objectives of land use planning or by the objectives of transport planning.

The Finnish Road Administration has begun a reform process (autumn 2002) for transport planning that aims e.g. at integrating land use planning and transport planning. This reflects the 1999 amendments to the Road Act (243/1954, amendment of Section 10, 133/1999). The existing framework for transport planning is described in Figure 3. The inter-agency collaboration between regional councils, regional environmental authorities and municipalities required by the new Land Use and Building Act does not however provide a clear role for Finnish Road Administration. It is also uncertain how detailed transport plans should proceed in land use planning. The project aims at clarifying these and shows that there is also tiering across different sectors and not only hierarchical tiering within sectors. Similar 'cross-tiering' may occur within general regional development efforts and sector specific programmes.

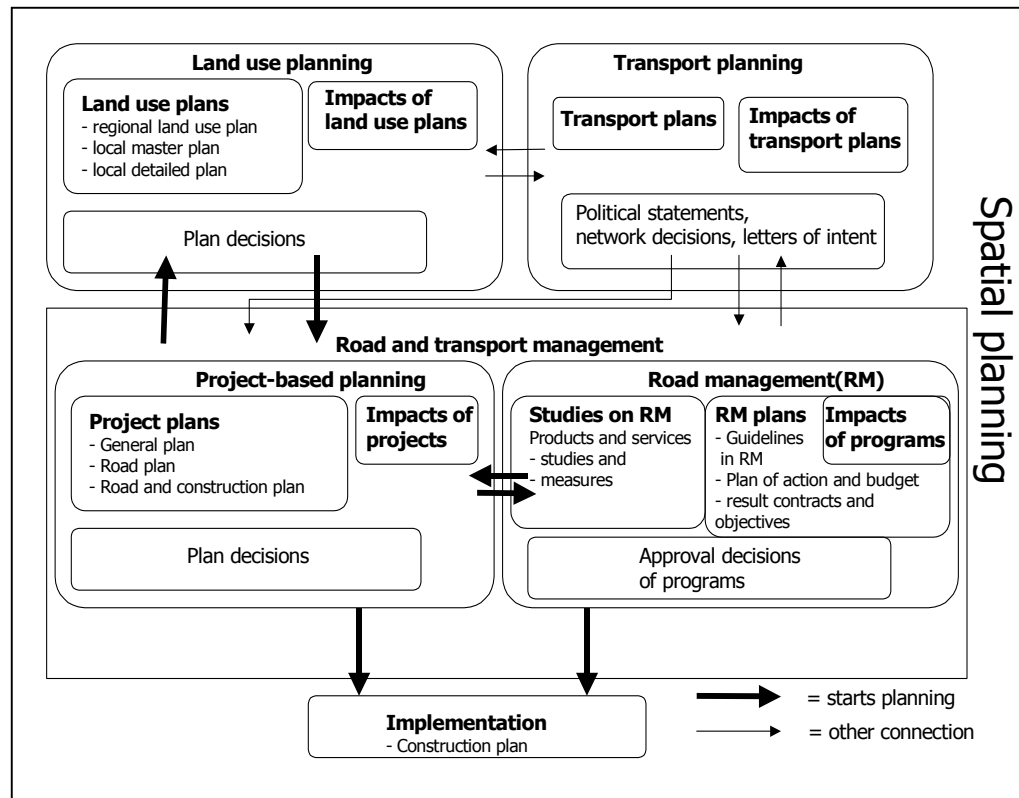


Fig. 3. Planning processes for transport

Consideration of alternatives

In some respects, the scope of alternatives in the preparation of policies plans and programmes increases when moving to more general planning levels. Thus it is conceivable that the alternatives related to policies cover the broadest range, whereas alternatives related to programmes are more restricted. In practice, this general view of alternatives is not very helpful. Despite the consideration of alternatives, it has proven difficult to formulate them as part of assessments, and policy related alternatives have not necessarily been broader than the programme alternatives.

Although all of the examined assessments dealt with alternatives, there was considerable variation in the role of the alternatives and the constraints placed on them. The Finnish experience shows that alternatives can play very different roles: exploratory and visionary alternatives map possible worlds; variations on a single theme prepare the ground for a

compromise; and demonstrative alternatives serve to prove that the chosen solution is the only possible or clearly the best alternative. In several assessments, two of these functions were combined. For example, in the programme for enhancing the use of renewable energy resources, one alternative considered the exclusion of all subsidies, whereas the other alternatives maintained or increased modestly the subsidies. The starting point for the whole programme was clearly a modest increase in the subsidies.

In most of the transport plans and programmes, the consideration of alternatives has been fairly exploratory and not overly restricted by what is possible or realistic. In the assessment phase, the aim has been to examine what constraints and conditions would arise under different scenarios. A key task has been to identify and co-ordinate means for achieving various objectives. The road maintenance policy was developed using such an objectives approach.

In this context, alternatives have tended to focus on the needs of different user groups and been labelled accordingly. For example, in the Helsinki Metropolitan Area Transport Plan, they were termed 'the reference alternative', the 'public transport alternative' and the 'car alternative'. An approach based on interests was used in the natural resources programme for Western Finland, with conservation oriented and exploitation oriented alternatives presented for the region's forests. In certain assessments of regional development programmes, alternative visions were developed using SWOT techniques but these were not carried into full-blown alternatives at the level of measures.

The clearest examples of justifying alternatives were the national forestry programme and the *Natura* 2000-programme. In these assessments, the chosen alternatives emerged as the best compromises. The compromises were, perhaps not surprisingly, eventually criticised in both hard-line conservationist and hard-line forest exploitation groups.

The National Climate Strategy was based on a comparison of two alternatives with a 'business as usual' scenario. However, the formulation of alternatives was severely constrained by predetermined normative assumptions related to the highly politicised process for preparing the strategy. The alternatives were only slight variations on the compromise. Interest groups criticised the strategy for being based on tunnel vision and too short a time span. This criticism was also repeated by the Parliament, which debated the strategy and finally approved it.

The Uusimaa regional plan included a comparison between 'business as usual' and the actual proposal. It was argued that the lack of alternatives was a result of previous commitments to the policies of the larger

municipalities in the 1960 – 1990s. The debate and criticism on the lack of alternatives dominated the discussion on the assessment needs.

In Kangasala the SEA was integrated into the development of the alternative partial master plans. The process produced distinct alternative plans for the area. The alternatives aimed at highlighting different future options in a transparent way. This kind of treatment of alternatives is extraordinary in land use. In land use planning explicit comprehensive alternatives are seldom drafted. Neither are they required by the Land Use and Building Act. All interviewees also stressed this and in general they did not see alternative master plans to be necessary. This reflects in part the nature of land use planning, which differs from the preparation of many other policies and programmes. It would, however, be wrong to claim that there is no consideration of alternatives in land use planning.

Land use planning is a process that produces new alternatives and excludes old ones continuously. Different plans have different scales and alternatives are produced and presented rather in individual projects or in local detailed plans. This also explains why there is no definitive state of completed impact assessment. The assessment is, as the planning itself, a never-ending story, although parts of the land used get gradually fixed through incremental decisions. Sufficient agreement on the impact assessment needs to be found during the process for each incremental decision. The whole planning process is thus characterised by constant negotiation enabling certain trading between separate projects. This negotiated process is accentuated in large municipalities that undergo dynamic change due to expansion of population or economic development. It also explains why there are difficulties in linking transport planning with land use planning: Transport planning has traditionally focussed on large projects with very concrete alternatives whereas land use planning is concerned with struggles over future options.

In land use a single plan is developed on the basis of existing land use. The plan tries to anticipate future development. Thus land use planning is strongly based on the use of scenarios. The negotiations on a proposed land use plan are therefore a debate on how realistic the foreseen development is considered to be. Much of the discussion on possible alternatives takes place in other programmes that are guiding policies for spatial development. In the urban growth areas, for example, there are specific Housing Programmes and Business Development Programmes. On the regional level there are e.g. regional programmes and regional schemes, as discussed earlier.

Assessment methods and approaches

The SEA Directive does not specify the type of methods or approaches that should be used in an assessment of the issues listed in appendix I of the Directive. The assessments examined here have used a wide range of methods, from quantitative modelling to collection of qualitative information and expert opinions. In fact, common to all is a combination of methods and approaches. Moreover, the assessments indicate that it is not possible to undertake detailed quantitative analyses of all relevant aspects. Several assessments, e.g. the assessment of the programme for renewable energy resources, have hinted at the need to carry out a life cycle analysis (LCA) of some aspects of the policy, plan or programme, but none of the cases examined here applied this approach. Given the available resources, it is unlikely that a LCA could be done as part of the assessments. The demand for LCAs should perhaps be seen as a reflection of the fundamental uncertainty that pervades all assessments of strategic decisions.

Another key methodological issue concerns the scope of assessment, in particular the combination of economic analyses with the environmental assessment. All examined assessments had clear links to economic activities, and for some there are established procedures for carrying out the economic appraisals. In the assessments of the *Natura 2000* programme and the national forest programme, economic calculations were part of the assessment. In these cases, the combined assessment clearly increased the interest in and weight of the whole assessment. In the assessment of national climate strategy, the environmental assessment was carried out separately but co-ordinated with the economic analysis. This arrangement caused some confusion. The main interest was clearly in the economic assessment, but some issues, such as the views of different interest groups, could probably have been handled better, perhaps through a truly combined assessment. Similar co-ordination problems were encountered in other policies, plans and programmes for which separate and loosely combined assessments were made on various types of effects. With separate assessments, more effort has to be spent to achieve a final aggregation and synthesis of the different effects.

All of the assessments encountered uncertainties and data deficiencies. These uncertainties have been noted, and in some of the assessments the uncertainties were systematised. The uncertainties were also exploited by various groups, which caused important conflicts related to the validity of various pieces of information: who can say what and on what grounds, whose information is accepted and who will have to produce extraordinary evidence in order to convince others? These findings show that as-

assessments are closely related to questions of power and authority. Assessments, however, may help to increase the transparency somewhat.

In order to achieve a systematic treatment of some uncertainties, the Nordic Triangle assessment separated the issues influencing the development into background variables and decision variables, thus highlighting more clearly what the assessment was about (Valve 1999). In the assessments of the national forestry programme, the regional development programme and the national climate strategy, SWOT type analyses were made and synthesised into best and worst case scenarios. These have been used in the subsequent public discussions on the effects and have thus diversified the view of what the policy, plan or programme actually is about.

The Land Use and Building Act sets standards on planning. These include general objectives in land use planning as well as specific content requirements for the various plans concerning these objectives. The general objectives include sustainable development. Regional planning emphasises regional and community structure (e.g. ecological sustainability of land use and environmental and economically sustainable arrangements of transport and infrastructure). The local master plan, in turn, must be drafted considering the community structure and living environment, i.e. functionality, economy and ecological sustainability of the community structure and opportunities for a safe and healthy living environment, which takes different population groups into equal consideration. How these contents requirements are assessed in the planning process has been the key question in land use. According to one interviewee there has not been time for any other kind of methodological development. While it is too early to assess the fulfilment of general sustainability and living environment quality objectives, there have been some consequences stemming from the specific contents requirements. Due to improved consultations, different content requirements are emphasised relative to those emphasised in the previous legislation. New impact assessment needs have also arisen.

Spatial planning has changed with the introduction of GIS-based computer aided tools. Spatial planning is here understood as a wide set of actions integrating environmental, economic, land use etc. planning. GIS-based tools have also been developed for spatial planners in order to aid the combination of information e.g. on the natural environment and socio-economic factors. The Planner's Toolbox (PTB), for example, is a real-time, interactive web-based tool mainly for regional planners offering knowledge on how to use geographical information and geographical information systems in planning (Ristimäki & Oinonen 2001). The main emphasis is on how to implement the principles and practices of sustain-

able development into spatial planning. These kinds of tools might also be used for reporting and for facilitating participation.

Reporting

All the assessments were publicly reported. In all cases, assessment findings have been reported in the actual documents for the policy, plans or programme. In some cases, the assessments were also published as separate reports. The National Climate Strategy is an example of a case with several types of reporting: the strategy itself includes a brief mention of the environmental effects; the background document of the strategy devotes a chapter to the various assessments that were made; and, finally, the detailed assessments were published separately, as well as the sector specific material that was used in the preparation of the strategy. In land use planning the draft plan itself also works as assessment report although separate assessments are frequently published.

The most common form of publication has been that of printed reports. The more recent assessments have used the Internet as one important channel for the distribution of information, including progress with implementation. A further advantage of the Internet relates to its cost effectiveness as a way of presenting and distributing drafts of the policy, plan or programme and the assessment of the proposal. For example, the National Climate Strategy and its assessment were posted in draft form on the Internet. The Internet was also used to disseminate information on the national land use objectives. In Uusimaa regional land use planning the Internet was also found to be a useful channel for public comment with 50 % of comments received via Internet.

The contents of assessment reports have varied from brief descriptions of likely effects that have been identified to more extensive analyses of consequences and alternatives. The original National Forestry Programme contained a one page expert opinion based overview of environmental effects, but the Chancellor of Justice did not consider this to be a sufficient assessment of the likely effects, which led to a detailed assessment that dealt with environmental, economic and social effects.

According to the Land Use and Building Act a special participation and assessment scheme is required to inform the public about participation and interaction procedures and impact assessments (Fig. 1). The initiation of the planning process must also be publicised so that the interested parties have the opportunity to obtain information on the principles of the planning and of the participation and assessment procedure.

The way in which various plans should be presented is regulated in the Land Use and Building Act. Regional land use plans and local master plans are presented on a map that includes a key to the symbols and writ-

ten regulations. The plan also includes a report, which provides information for assessing the goals and options of the plan and their impacts, and justifications for the approaches adopted. According to an interviewee the new Act is more specific about which impacts may be presented in regional land use plans (regional impacts) and which should be presented in local master plans (local impacts). The interpretation is obviously context specific and will have to be carried out separately in every planning process.

Public participation

According to the Finnish constitution, everyone has the right of access to documents and recordings produced by, or in the possession of, the public authorities. The Act on Public Access to Information (621/1999) makes it clear that the public authorities should inform citizens not only of their decisions but also of the preparatory work leading to decisions. This applies also to policies, plans and programmes and thus gives strong backing for public participation in the environmental assessments.

In the structural funds programmes, participation is based on the concept of partnership. In practice, this meant assembling a broad group of stakeholders, but not providing direct access for individual citizens. Similar broad groups with members representing various interests have been used in other assessments as well, but many have also provided broader access for the public. In the resource plan for Ostrobothnia, more than 1000 groups were contacted in order to assemble local working groups. In the regional intermediate term road plan of Savo-Karjala, several consecutive hearings were organised to deal with specific issues. The organised group discussions contributed to this process by highlighting the views of different interests, and by giving interest groups the opportunity to interact with and to understand each others' arguments.

In a few assessments, attempts were made to reach the general public by newspaper advertisements. These attempts, e.g. in the programme for renewable energy resources, have not been particularly successful. The response was limited and the general interest in the programme was low.

Participation in land use planning has changed significantly at a conceptual level due to the new Land Use and Building Act. The Act was expected to make the planning culture more participative and open. The interviews and other sources suggest that the early experiences have been fairly positive although critical remarks have been voiced e.g. by industry representatives.

The positive findings indicate that participation possibilities have increased and become more diverse. The intensity of participation has been increasing as well. The development of participation has been slower

in regional planning than in local planning due to the lack of tradition and the generality of regional planning. In the Uusimaa regional land use plan the public comments dealt mainly with individual projects and not with region wide issues. The results also reflect the experience of different NGOs. Due to the lack of information it is impossible to analyse the role and development of participation of an individual citizen. The main problem with the desire for increasing participation has been the time delays in planning. Some have also expressed the concern that the public may be confused by the opportunity to express opinions in different phases, i.e. both during the initiation of planning and when the draft plan is presented (see Fig. 1 and below).

One of the innovations of the Land Use and Building Act is the specific participation and assessment scheme that has to be prepared for plans in the preparatory phase of planning (Section 63). In small plans (e.g. a local detailed plan with few interested parties) the scheme can be very simple. In the scheme the target and objectives of planning, the key impacts to be assessed and the participants to be consulted are defined.

In regional planning the interested parties must have the ability to comment on the participation and assessment scheme. In local master and detailed planning the local authority may negotiate with the regional environmental centre on the adequacy and implementation of the scheme. Moreover, the interested parties have the opportunity to propose negotiations to the regional environment centre if they are unsatisfied with the scheme's contents. This is before the plan proposal is made available to the public. If the scheme is inadequate, the regional authority shall arrange negotiations with the local authority to examine what additions are required. The assessment of the adequacy of the scheme is always considered on a case-by-case basis.

Impacts that are to be assessed during the planning process are specified at a general level in the scheme. The scheme includes descriptions of the significant impacts for the area in question and the scope of the impact assessment. If an impact assessment is considered unnecessary this should also be stated. The range and borders of the planning are specified. The scheme should also discuss the possibility of and the need for alternatives.

In the follow-up studies the tool has been found useful for systematising the planning process while its role in organising the co-operation with and informing participants remains unclear. Small municipalities found it more useful than larger ones. The scheme has served authorities better than the other participants. A large number of NGO's surveyed did not recognise a participation and assessment scheme.

In 2000-2001 negotiations with the regional environment centre on the adequacy and implementation of the scheme had been organised eight times out of 16 suggested implying that negotiations are not used very often. Deficiencies in the schemes were identified with respect to participation, studies and impact assessments. The municipalities and regional environment centres generally agree on sufficient participation possibilities (uncertainty on the sufficiency caused oversized participation arrangements in some cases). The sufficiency of studies and impact assessment has been more often than not been a significant cause of disagreement between the municipalities and the regional environment centre.

The continuous nature of land use planning as well as its long time-frame constrains public participation because the public may have difficulties in understanding the indefinite target of planning. Correspondingly the scope of the impact assessment can be the subject of never-ending discussions as new participants and new aspects enter during the planning process. Due to this organic character of land use planning, participation is also a continuous process with frequent openings as there are always new planning processes about to begin.

None of the strategic environmental assessments have systematically analysed the input provided by the participatory processes. Neither is there any requirement in the Land Use and Building Act to do so. This suggests that public participation has been seen as an expression of democracy and an expansion of democratic rights, but little consideration has been spent on the conditions for improving its effect on planning and on how one can develop analytical and systematic dialogues based on participation.

Use in decision-making

On paper, all of the assessments were used in the decision-making process, in the sense that assessment results were referred to in the final documentation and decision-making. It is more difficult to verify the actual influence on the choices made. Due to the nature of the decision-making process, individual findings seldom have a clear-cut effect on the outcome but instead may exert a gradual influence. In order to detect this influence, a separate evaluation that can clarify both the direct and indirect effects of the assessment would be necessary.

An evaluation of the assessment of the Helsinki Metropolitan Area Transport System Plan 1998 indicates a lack of strong immediate influence on decision-making, primarily because the basic agenda was set using criteria other than those dealt with in the assessment. This does not, however, mean that the assessment would not influence the planning, only

that the influence is slower and more indirect than a rationalistic view of such assessments would otherwise indicate (Kaljonen 2000).

The general emphasis has shifted from viewing assessments as a way of producing specific information to a more integrated view that makes the assessment a part of the preparatory process (Jansson 2000). The assessments examined here contain mixtures of these views. In the renewable energy resources programme, the assessment provided information for the discussions of the measures contained in the programme. In the National Forestry Programme, the assessment was more akin to an *ex-post* evaluation that had little influence on the programme itself, but some influence on its implementation. In the road maintenance policy as well as in the regional planning, the assessment contributed to the discussions of objectives and highlighted various aspects of the planned measures.

In land use planning the national land use objectives and regional land use plans are general policies that are concretised in local master plans. Regional land use plans have more direct use in decision making in rural communities whereas in densely populated communities the solutions from regional plans are always specified in more detail.

Local land use planning is an interesting case since the local planning authority has a certain freedom to choose how strongly the plan should affect future development. According to the Land Use and Building Act it is possible to draft a local master plan without legal consequences (Section 45) making the plan a policy document instead of a plan. The choice is also likely to affect the nature of the impact assessment and the use of the impact assessment, but there is as yet insufficient empirical material to analyse these effects.

Land use planning is also a consistent example of representative democracy in action, as the final decisions on local plans are made by local councils. There is no information on how public participation has affected decision-making in any of the assessments. However, the Land Use and Building Act requires that reasoned responses are given to parties that have expressed opinions on the plan. The new planning procedure in the new Act aims at a consensus-like planning posture and emphasises the questions arising from the coexistence of participative and representative democracies. In this fashion land use planning differs from many other plans and programmes. In most other plans and programmes the control exerted by the institutions of representative democracy is often indirect and weak, except for those that are approved at a high political level by the Government, some of which may be subject to considerations by the Parliament. The national climate strategy is here a case in point.

Monitoring

All the examined assessments include some reference to monitoring. In the simplest form, the reference is an acknowledgement of the need for future follow up (both land use cases) or a list of matters to be examined further (e.g. Pirkanmaa waste management). In most assessments, there are also more detailed considerations related to monitoring. Some assessments include a proposal to set up a specific monitoring group that would deal with implementation and effects monitoring (e.g. the renewable energy resources programme, the Pirkanmaa waste management). In some cases, the monitoring plan included indicators and monitoring variables for which data collection is taking place already or is reasonably easy to organise (e.g. the natural resource plan for western Finland). The references to monitoring understandably become more vague the closer one gets to policies. For policy, monitoring largely concentrates on the achievement of objectives, which represent the intended effects (e.g. the national land use objectives).

The Land Use and Building Act sets requirements for keeping plans up-to-date (for regional plans, master plans and local detailed plans Sections 26, 36 and 51 respectively). For local detailed plans a special monitoring obligation is also specified (Sections 60 and 61). These requirements were introduced in response to problems caused by the previous legislation under which an obsolete plan could become activated or used as an argument for projects that otherwise could no longer be justified.

Discussion

Similarities and differences in the assessments

Fisher (2001) argues that it is possible to distinguish between ‘policy SEA’, ‘plan SEA’ and ‘programme SEA’ and that assessments within each group are similar. In this classification, policy assessments are broad, scenario-driven and examine broadly different types of effects, which are fully integrated into the formulation of the policy itself. The National Forest Programme, the National Climate Strategy, the national objectives for land use and the road maintenance policy 2015 are typical policy documents that aim to influence plans, programmes and even projects at lower tiers. In all these cases, the assessment could have played the role envisioned by Fischer (2001). In practice, the assessments of the road maintenance policy and the national objectives of land use came closest in establishing a policy dialogue. The assessment of the National Climate Strategy established a dialogue, but it was partly set aside from the core discussions, which dealt with the economic effects. Finally, the assessment of

the National Forest Programme contributed only to the discussion on implementation.

These differences can be partly attributed to the novelty of the assessment culture. The Minister in charge of the National Forestry Programme put it explicitly 'when we started I thought that you can't assess anything before its ready, in retrospect this was a too simplistic view'. One can, however, argue that the various degrees of difficulties in achieving integration also reflect power relationships within the field or sector that the assessment takes place. The degree of integration will depend on whether the assessment experts are considered to be within or outside the group that has the power to formulate the policy.

The Road Administration has developed a culture that includes environmental assessments and those responsible for the assessments are experts within the system. Land use planning developed impact assessments even before the new legislation required it and here the planners are also often assessment specialists. The National Climate Strategy was developed under the leadership of the Ministry of Trade and Industry, which traditionally has had a very strong role in policy formulation although external experts are used. This Ministry is, however, not particularly interested in having results that could question its competence and this was felt in the environmental assessment and the economic assessment alike.

Willingness to actually use assessments in decision-making is an important determinant of what the assessment will look like in practice. When such a willingness is lacking, the assessment will not be able to influence the policy, even though it aims to assess options. The willingness to use assessments is also linked to the results: an assessment that supports the main policy line will be extensively used, seemingly strongly influencing the policy, plan or programme.

Similar explanations for differences in the way assessments have been carried out and, in particular, influence decision-making can be found in other types of assessment. Of these types the 'plan SEA' assesses the impacts particularly of spatial alternatives (e.g. Uusimaa regional plan) whereas 'programme SEA' is used for identifying project priorities (e.g. Finnish *Natura* 2000). Differences can be observed however even within similar assessment tasks. Thus the various structural funds programmes⁷ differed widely in their environmental approach. In one of the programmes, the influence of assessment is easy to trace: the different measures reflect the environmental discussions, e.g. in the justifications and in

⁷ Although they are called 'programmes', their assessment falls into the category of 'plan SEA' as used by Fisher (2001), thereby showing the difficulty related to terminology.

the funding criteria. Whereas in the other two programmes, the environmental aspects are reduced to one particular set of measures and a brief description that meets the letter if not the spirit of environmental assessment.

One important reason for the similarity or difference between assessments appears to be the planning context. If the object to be assessed is clearly defined, in the sense that all of the important stakeholders agree on what the policy, plan or programme is about, the assessment is relatively easy to plan and conduct. If there is disagreement on the nature of the policy, plan or programme however the assessment will face difficulties. In practice, this means, for example, that some stakeholders attempt to raise broad strategic issues while others wish to make the whole exercise a technical listing of observations that can be used to justify specific (predetermined) choices. Under such circumstances, the assessment is demanding, because it will somehow have to deal with both aspects, thus leading to a mixed rather than a clearly tiered assessment.

Several of the assessments examined here display these features. The *Natura* 2000 assessment simultaneously had to deal with the selection of specific sites and a broad discussion on the need for nature conservation. The National Forestry Programme outlined general forest policies, but also specified sums to be used for particular activities, such as improving forest roads. The National Climate Strategy outlined a path of development towards greater energy efficiency, but also focused on a single project - the question of a fifth nuclear reactor in Finland.

Comparison between land use planning and other policies, plans and programmes

When summarising the differences between land-use planning assessments and other policy and programme assessments one key aspect is the continuous nature of the planning and its long time frame. The incremental nature of planning is accentuated in land use planning and this is reflected in the development and treatment of alternatives and also in certain aspects of the impact assessment. For example a partial master plan raises certain issues that are important within the scope of the partial plan itself, but then there are other issues that are relevant and that arise from the relationship between the partial master plan and the whole municipality.

Moreover, the role of public participation is more widely emphasised and obvious in planning. The Finnish constitution gives everyone the right to influence decisions that concern their own living environment. The spirit of the Land Use and Building Act requires reflexivity in planning, and it was also expected to make planning culture more open and

interactive. The new planning procedure has clearly emphasised the role of participation and collaboration although impact assessments have already had a specific role in land use planning before the new Act came into force. In the formulation of other policies and programmes there is less tradition for public participation and the legal backing is also absent except for the general constitutional demands.

Differences within similar assessment tasks are common also within land use planning, where e.g. in the case of master plans public participation has developed particularly in the larger municipalities. According to the interviewees one can also expect differences in the impacts assessed in the planning process. This depends on the legislation that is applied. The interviewees felt that in the EIA Act the scope of impacts was wider than in the Land Use and Building Act. The latter puts emphasis on physical environmental impacts.

The debate on the scope of assessments dominates both the general discussion as well as the examined cases in land use planning. Even the Kangasala case, which is seen as exhibiting a textbook example of planning alternatives, has faced criticism: an appeal having been made on insufficient assessment. This seems to differ from other policies, plans and programmes since the interviewees saw no problems in the general acceptance of the tasks of different land use plans.

Assessment of bills vs. assessment of policies, plans and programmes

In Finland there is a clear demand to carry out environmental assessments of Government bills. All bills that are submitted to the Parliament should, whenever relevant, include a separate subchapter on environmental effects together with the subchapters on economic effects and administrative effects. Thus there is an unambiguous check -point for the existence of an environmental assessment. In this sense the assessment of bills is more formalised than the assessment of policies, plans and programmes, which, with the exception of land use plans, lack an explicit procedural stage at which the existence of an assessment can be checked. Research has however indicated that this procedural check is often purely formal. Bills have not been returned from Parliament because of the lack of proper assessments. In recent years moreover the quality of bills and their assessments has been criticised (Ervasti et al. 2000).

Another clear difference between bills and policies, plans and programmes is that the format of bills is strictly controlled and largely standardised, whereas policies, plans and programmes come in many shapes and forms. The standardised format of the bills limits the presentation of assessment results. The bill and its justifications, including the assess-

ment, represent in fact a synthesis of the preparatory work that precedes the bill itself. This work is frequently carried out by ministerial working groups or, in more sensitive issues, committees or commissions, which include interest organisations. The result is often an extensive report. If the environmental assessment is taken seriously this report should include it. The work of ministerial working groups, commissions and committees resemble more closely the preparatory work for policies, plans and programmes. The time constraints are usually less demanding and the working groups, commissions and committees are often in their letter of appointment requested to consider e.g. alternatives.

There are frequently links between the preparation of bills and policy documents. Policy documents may identify the need for more detailed legislative work. The national climate strategy is a case in point. Many of the measures envisioned in the strategy will require amendments to existing legislation or new laws. In these cases the environmental assessment of the policy can support the preparation of the legislative proposals. One can argue that this is real test of the usefulness and use of the environmental assessment of a policy. Only in special cases will it remove the need for an assessment altogether. The legislative is moreover likely to introduce new considerations and alternatives that will require assessments of their own.

The scope for standardisation

Finnish SEA experience indicates that there is limited scope for the standardisation of procedures. Probably the most promising opening for some standardisation is at the level of public participation. Such standardisation could simplify procedures by setting out clear obligations on how to inform the public and the opportunities for interested parties to provide input to the process. It would help those responsible for the assessment to plan the process and could lead to the specification of certain quality criteria for the assessment process. The Land Use and Building Act has standardised the procedures for participation in land use planning. This standardisation did raise different opinions among the interviewees. Some considered that the fixed rules of a 'planning game' have made it easier for the public, whereas others noted that the fixed rules restrict the opportunities of the responsible authorities to decide how to best use resources in a specific planning situation.

Some standardisation of public participation can be particularly important for policies, plans and programmes that are controversial in some respects. Without legal backing, participation may end up being restricted to a negotiation among a few strong interest groups. Standardised procedures can also be envisioned for some negotiations between authorities,

and would be particularly useful for the process of trans-boundary assessments. Here experience with project level assessments has shown that a common cause of difficulties is the lack of structured processes that can be clearly described to the authorities and to the public in the neighbouring country (Hildén and Furman 2001). The contents of the environmental report can be standardised on a general level, i.e. the type of effects that are examined.

One key issue will be the relationship between environmental, economic and social information. A requirement to include all of these aspects provides an incentive to form multidisciplinary teams for assessments. If the assessment is strictly limited to environmental issues, highly specialised but narrow teams can handle the assessment tasks. In this case, the synthesis will have to be made by those actually drafting the policy, plan or programme, as they can use a 'divide and rule' approach to the different assessments.

Restricting the environmental assessment to a narrow environmental concept will increase the number of specialised assessments: economic assessments, social assessments, cultural assessments and so on. It is obvious that the demands to carry out various *ex-ante* assessments will increase, just as the demands for *ex-post* evaluation have also increased. It is meaningful to try to combine the different *ex-ante* assessments into a single comprehensive assessment. Such assessments are challenging and require methodological development for multidisciplinary studies. The possibilities of standardising these assessments are, however, limited. Again, land use legislation provides an example of how the assessments are steered by specific contents requirements. There is as yet no information as to how this requirement has affected the assessments. The regulation on reporting also offers the possibility to standardise, to some extent, the impacts on which information has to be provided.

Certain basic tools, e.g. economic models and qualitative strategic tools such as SWOT analysis, have often been found useful in the assessments of policies, plans and programmes. These can be methodologically standardised to a certain degree, but they will obviously have to be adapted to the specific context. Requirements concerning the transparency of the description of methods can also be 'standardised' to some degree, but a significant proportion of the data presented in assessments of policies, plans and programmes will represent syntheses of available information and possible new combinations of older data, rather than new primary data. Therefore, it is equally important that original sources are quoted and critically reviewed.

Challenges in implementing the SEA Directive

Several authors have argued that the environmental assessment of policies, plans and programmes should lead to more sustainable societal development. For a review see Noble (2002) who concludes that 'the effectiveness of SEA in achieving sustainability objectives will only be realized when a structured and systematic methodological framework is adopted' (p. 14). Does the SEA Directive represent such a framework and should one put such strong normative demands on the environmental assessment?

The directive provides a general framework, but it does not, and in the light of the Finnish experiences discussed here, should not, specify a methodological framework. The methodological approaches are context specific and it may be helpful to develop such frameworks for certain sectors, but they should not be specified at the level of legislation. Legally specified methodological frameworks easily become straightjackets that may lead to a waste of resources and a loss of legitimacy for SEA in real planning situations (see also Partidário 2000).

The thought that SEA could dictate sustainable solutions is at odds with the experiences examined. If sustainable policies, plans and programmes are to emerge; whatever sustainability happens to mean; they will be the result of a development of the whole preparatory process, and not a separate specified 'SEA procedure'. The assessment may contribute to open and transparent preparation of policies, plans and programmes, but it cannot dictate the outcome although such demands will be made. One of the main challenges in implementing the SEA Directive will be in fitting it into the existing system of preparing plans and programmes and thus in determining its scope at the Member State level. The Finnish examples reviewed here suggest that many types of plans and programmes can be covered. Although policies are explicitly excluded, they are often linked to plans and programmes in such a way that they will be subject to *de facto* assessment. In this case, however, procedural elements can be excluded. For example, some policy documents may be prepared in such a way that full-blown participatory procedures are not applicable although Finnish legislation requires general access to the preparatory material. The dividing line between policies on one hand and plans and programmes may, however, be difficult to specify. Our examples indicate that typical policy documents may contain explicit reference to consent procedures. The integration of the assessment with the preparation of the plan or programme in such a way that it improves the preparatory work from a technical information standpoint while simultaneously offering possibilities for democratic input into the processes is challenging. It will require po-

litical will to initiate and use assessments and such a will does not develop overnight. In Finland, the translation of the basic idea of SEA into more or less accepted practice has taken nearly a decade. To what extent a fixed procedure will speed up this integration is still open to debate.

The Land Use and Building Act guides SEA in terms of land use planning. The planning itself is largely formalised through procedures specified by the act (Chapter 8 of the Act) and the assessment is an integral part of the process. Thus the Land Use and Building Act illustrates one way of integrating assessment with the planning process, including broad participation possibilities. The implementation of the act has only been preliminarily evaluated. It may also be questionable to use land use planning as a model for the preparation of other policies, plans and programmes. The formalism of land use planning and the fact that there is a large body of experts devoted to the task of planning may make it easier to adopt a formalised approach to environmental assessments. In other policies, plans and programmes there may however be a greater need for flexibility.

The third main challenge lies in developing public participation. In part, the challenges are practical, e.g. how to reach potentially interested stakeholders and organise their input in such a way that it can be used in the assessment. A more fundamental challenge concerns issues of representative democracy, e.g. which groups can act as spokespersons for the public. These issues are related to the problem of raising interest in abstract plans and programmes, especially those with strong political elements.

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Basis for implementation of the EU Directive 2001/42/EC in Iceland

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1. Introduction

The aim of this paper is to further the understanding of the practical experience of strategic environmental assessment (SEA) in Iceland, as well as the prerequisites for the implementation of SEA in Iceland, in particular, focussing on the implementation of the EU Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. This will be done by:

- Describing the existing SEA legislation.
- Giving an overview of SEA practice in recent years.
- Giving a preliminary overview of which plans and programmes are likely to become subject to the requirements of the EU Directive 2001/42/EC.
- Discussing three aspects of the SEA process: namely, reporting, consultation and quality assurance.

The study has been conducted by means of a review of Icelandic planning documents and legislation, as well as through consultation with practitioners in Iceland.

A key assumption in this paper is that SEA will improve the integration of environmental concerns and make planning processes and decision-making more transparent with benefits for different actors and interest groups, while also giving better opportunity for dialogue and the exchange of information between the agencies responsible for planning at different levels. Thus, SEA has an important role to play in making planning better equipped to contribute to sustainable development.

Structure of the paper:

Chapter 1: *Introduction.*

Chapter 2: *Framework for SEA in Iceland.*

Current SEA legislation in Iceland described in brief.

Chapter 3: *Practice of SEA in Iceland.*

An overview is given of SEA practice in Iceland, by describing each case in respect of the key aspects of the SEA process, as identified in Directive 2001/42/EC.

Chapter 4: *Implementation of the EU Directive in Iceland.*

A preliminary assessment and overview is given in respect of which plans and programmes are likely to become subject to Directive 2001/42/EC in Iceland.

Chapter 5: *Examination of selected aspects of the SEA process.*

Three aspects of the SEA process have been chosen for closer inspection: reporting, consultation and quality assurance.

Chapter 6: *Discussion.*

Prerequisites for implementation of SEA in Iceland, especially Directive 2001/42/EC.

2. Framework for SEA in Iceland

The only legal requirements for the environmental assessment of policies, plans or programmes in Iceland are to be found in the Planning and Building Act no. 73/1997 which came into force in January 1998, in respect of development plans (i.e. land use plans or physical plans). According to art. 9, paragraph 5, development plans shall account for the impacts of the plan, its objectives and proposed development on the environment, natural resources and the community, including a comparison of possible alternatives. This is taken a step further in the Planning Regulations no. 400/1998 which came into force in July 1998. According to art. 3.3, regional and municipal plans shall account for the impacts of the plan, its objectives and proposed development on the environment, natural resources and the community, including a comparison of possible alternatives. Planning-alternatives shall be described, e.g. regarding location, land use, density, layout or individual developments, and then compared with respect to environmental impacts. Also an attempt shall be made to use environmental assessment to ensure full consideration of environmental concerns and of the aims of the planning regulations, which include the aims of encouraging the rational and efficient utilization of land and natural resources, ensuring the preservation of natural and cultural values, and the prevention of environmental damage and over-exploitation, based on the principles of sustainable development. Furthermore, the Planning and Building Act's and Planning Regulations' general requirements on the documentation of planning proposals, consultation with public agencies and the public, and on decision-making, all correspond to a considerable extent to the requirements of Directive 2001/42/EC on those aspects of the SEA process and documentation.

3. Practice of SEA in Iceland

In order to give an overview of the practical application of SEA in Iceland the projects known to the authors of this paper are listed below and described with reference to the requirements of Directive 2001/42/EC (see Table 1 below).

Table 1 summarises information about environmental assessments that have been conducted on plans and programmes in Iceland in recent years. Most of the environmental assessments have been conducted on land use planning proposals at the municipal level. A few have also been done on regional land use plans and plans for individual infrastructure projects (prepared as 'special regional plans' according to the Planning and Building Act). Two examples here being those relating to the environmental assessment of sectoral plans at the regional/national level, both are ongoing. These particular examples cover an afforestation plan in Northern Iceland and a national framework programme for the utilization of hydro and geothermal energy resources. Two of the cases presented in Table 1 date back to around 1990, though most of the cases are more recent, and can, to a large extent be related to the environmental assessment provisions introduced in the new Planning and Building Act of 1998.

Most of the more recent examples in Table 1, with the exemption of the framework programme on hydro and geothermal utilization, fall closest to the description of a 'policy analysis/appraisal-inspired SEA' (see Sheate et al 2001) in that little if any baseline information is gathered specifically for the assessment, and the impacts are appraised against selected objectives or criteria. Even though the assessment itself does not include special public consultation, the EA is, in most cases, carried out in relation to a planning process according to the Planning and Building Act, where there are clear rules about public consultation and decision-making. These do however have to be reviewed, if they are to fully stand up to the EU SEA Directive's requirements on all aspects of the process, i.e. the report, consultation, decision-making, information on the decision and monitoring. Two of the earlier SEAs, the assessment in the Fossvogsdalur valley and the assessment in Skutustadahreppur, were done in a more 'EIA-inspired SEA' fashion (see Sheate et al 2001). These assessments also differ from most of the other cases in the sense that they were not carried out as part of a particular planning process, but as independent assessments of selected planning scenarios. Therefore the link between EA conclusions and decision-making is less apparent in these cases. It is however likely that the environmental assessment in Fossvogsdalur was important for the consensus later reached by the municipalities of Reykjavik and Kopavogur on land use in the valley. Moreover, the environmental

assessment done in Skutustadahreppur is likely to have had an indirect influence on planning in Skutustadahreppur, both on the municipal plan and on planning for individual projects in the area. The trend away from 'EIA-inspired SEA' can probably be partly explained by what has been considered acceptable detail and methods by planning authorities and practicing planners. Thus, methods and approaches have been chosen with regard to time and financial resources, so for example the extensive gathering of detailed baseline information has in most cases not been considered acceptable or necessary for the decision-making level of plans and programmes. This does however put more weight on the selection of criteria and the transparency of the qualitative judgements given on environmental impacts of the plan/programme in question.

The EU SEA Directive's requirements for environmental assessment relate to the legislative, regulatory or administrative basis of the respective plan or programme making and its preparation or adoption by authorities or adoption through legislative process by parliament or government (see art. 2 and 3 of the Directive). All of the cases presented in Table 1 could in principle fall under these requirements of the Directive. Indeed, all but one would be based on legislative or regulatory basis today. The exception here being the national energy programme, as this programme is based on a governmental decision (presented in the policy statement of the government), and not on legislative or regulatory provisions. Thus, it would be subject to the definition of 'administrative provisions' in art. 2 of the Directive, if plan and programme making such as that in respect of the national energy programme are subject to an assessment according to the Directive. It seems though to be clear, judging from the plan making process of the national energy plan, that the plan does set the framework for future development consent of projects falling under the EIA Act (which corresponds with Directive 85/337/EEC) and thus that it is likely to have significant environmental effects.

The EU SEA Directive gives a detailed prescription of the content of the environmental report, where the environmental assessment of the respective plan or programme shall be documented (see art. 5 and Annex I of the Directive). In all of the cases in Table 1 the environmental assessments have been presented in a report. It has not been systematically examined if these reports would have fulfilled the requirements set in the Directive. It is however clear that the requirements set for the production of planning proposals in the Planning Regulations (e.g. on the presentation of the planning proposal itself, on information of the state of the environment, on the relation to other policies and plans and on environmental assessment of the planning proposal) should ensure that the reports in the cases of the

land use plans made since 1998 came near to, or fulfilled fully, the Directive's requirements for documentation. In most cases however the assessment-elements (items e-i in Annex I of the Directive) of the reports have tended to be short and rather general. This can most likely be related to planners' unfamiliarity with SEA in general and especially with SEA methods in particular.

Directive 2001/42/EC prescribes that environmental assessment shall be conducted during the preparation of a plan or programme and before its adoption or submission to a legislative procedure. In many of the cases presented in Table 1, and in particular with regard to the municipal and regional plans, the environmental assessments have been carried out relatively late in the respective planning processes. This can be explained by several facts: When the environmental assessment requirements were introduced in the Planning and Building Act and Planning Regulations in 1998 many of the municipal and regional plans that have since been approved were already far into their planning processes, giving little real opportunity for SEA. Moreover, a lack of knowledge among planning consultants and local authority planners and politicians about the role of SEA and the possible methods of applying SEA in plan making have limited the influence of SEA on planning decisions to this date. The result is that SEA has in most cases had limited impact on the respective plans, and has thus served more as an exercise in getting those involved in the planning process acquainted with the SEA tool in planning and decision-making. The promising lessons learned have been related to a rather general understanding of the need to introduce SEA earlier in the planning process. A recent report on the effectiveness of SEA in the practice of development plans in the UK indicates that even when plans remain unchanged after the SEA, the SEA may still have an indirect outcome on it in the form of a better understanding of sustainability, environmental issues and the planning process. It may also contribute to more transparent decision-making and may also simply provide more ideas for the next round of plan making (Therivel & Minas 2002).

According to the EU SEA Directive, environmental authorities shall be consulted on the scope and level of detail of the information to be included in the environmental report. Consultation with environmental authorities has however tended to be conducted rather late in the planning processes of municipal and regional plan making, as the Planning and Building Act and Planning Regulations do not require this consultation to take place within a certain time frame or on specific elements of the documentation and/or process. Experience gained from project environmental impact assessment indicates that the introduction of formal requirements

for ‘scoping’-consultation in plan making would be beneficial for the whole process and documentation (mandatory scoping consultation and preparation of a scoping report were introduced for project EIA in the amended EIA Act in 2000).

The same can also be said about consultation with environmental authorities during the review of the respective planning proposals and the accompanying environmental report (see art. 6(1) and 6(2) of the Directive).

The cases presented in Table 1 fall roughly into two different groups when it comes to public consultation during a review of the respective planning proposal. In the planning processes following the Planning and Building Act the planning proposals and the accompanying environmental reports have been put on public display and the public invited to give comments, comparable with the provisions in art. 6 of the Directive. In the other cases, formal public consultation has generally not been conducted as part of the assessment/planning process.

As regards decision-making, the Planning and Building Act sets some basic requirements for decision-making and for the presentation of decisions, and most of the more recent cases presented in Table 1 have corresponded to them. They do not however ensure or provide for all of the aspects raised in arts. 8 and 9 of the Directive regarding decision-making and information on the decision.

Finally, none of the cases presented in Table 1 has included a monitoring programme, nor does the Planning and Building Act or Planning Regulations require that plans include monitoring provisions, though Directive 2001/42/EC requires that the environmental effects of the implementation of plans and programmes are monitored (art. 10 of the Directive).

Table 1. Practical application of environmental assessment to plans and programmes.

Plan/ programme	Type of plan/ programme and environm. assessm.	Time of planning process/EA process.	Preparation/ adoption. (art. 2(a) 2001/42/EC)	Basis. (art. 2(a) 2001/42/EC)	Environm. report. (art. 2(b), art. 5, ann.I 2001/42/EC)	Timing of EA. (art. 4(1) 2001/42/EC)
Plans for Fossvogsdalur on the boarder of the municipalities Reykjavik and Kopavogur	<i>Plan/progr.:</i> Two planning scenarios for the valley of Fossvogsdalur. <i>EA:</i> Environmental assessment of two planning scenarios for the valley of Fossvogsdalur.	1989-1990.	<i>Preparation:</i> Initiated by the local auth. in question and the National Plann. Board. The EA was commissioned by the National Plann. Board, without direct link to a particular planning process or a particular planning proposal. <i>Adoption:</i> NA.	EA commissioned by the National Planning Board.	An independent environmental report describing the main environmental impacts of two planning scenarios.	NA, as the EA was not directly linked to a particular planning process or planning proposal.
Environmental assessment for Skutustadahreppur	<i>Plan/progr.:</i> Four planning scenarios for the municipality Skutustadahreppur in north-eastern Iceland. <i>EA:</i> Environmental assessment of four planning scenarios for the municipality.	1991-1993.	<i>Preparation:</i> Initiated and carried out by the National Planning Agency in co-op. with the municipality, the Nature Conservation Council and the Ministry for the Environment. <i>Adoption</i> NA.	EA initiated and carried out by the National Planning Agency.	An independent report describing the main environmental impacts of four planning scenarios.	Preceded work on a new municipal plan for Skutustadahreppur.

Table 1 cont.

Plan/ programme	Consult. w. environm. authorities at the scoping stage. (art. 2(b), art. 5(4) 2001/42/EC)	Consult. w. environm. authorities at the review stage. (art. 2(b), art. 6 2001/42/EC)	Consult. w. the public at the review stage. (art. 2(b), art. 6 2001/42/EC)	Decision making, the taking into account of the ER and consult. (art. 2(b) & 8 2001/42/EC)	Information on the decision (art. 9 2001/42/EC)	Monitoring (art. 10 2001/42/EC)
Plans for Fossvogsdalur on the boarder of the municipalities Reykjavik and Kopavogur	Not carried out.	No formal consultation. The EA primarily included the production of an experts' report.	No public consultation was carried out.	The EA was not directly linked to a particular planning decision.	NA.	Not included.
Environmental assessment for Skutustadahreppur	Not carried out (note though that the Planning Agency, the Nature Conservation Council and the Ministry for the Environment were responsible for the EA).	No formal consultation. The EA primarily included the production of an experts' report.	No public consultation was carried out, except that the results were presented at public meetings at different stages in the EA process.	The EA was not directly linked to a particular planning decision.	NA.	Not included.

Table 1 cont.

Plan/ programme	Type of plan/ programme and environm. assessm.	Time of planning process/EA process.	Preparation/ adoption. (art. 2(a) 2001/42/EC)	Basis. (art. 2(a) 2001/42/EC)	Environm. report. (art. 2(b), art. 5, ann.I 2001/42/EC)	Timing of EA. (art. 4(1) 2001/42/EC)
Municipal plans	<i>Plan/progr.:</i> Comprehen. land use plans at the municipal level. <i>EA:</i> General assessment of few selected planning objectives.	Since 1998. Environm. assessment has been included to some degree on most municipal plans approved after Jan. 1998, when the Planning and Building Act came into effect.	<i>Preparation:</i> Municipalities. <i>Adoption:</i> Municipalities and the Minister for the Environment.	Planning and Building Act (PBA) and Planning regulations (PR).	Discussion on environm. assessment incorp. in the planning proposal. In most cases a short gener. descr. of the main foreseen likely envir. impacts of a few selected planning objectives, sometimes with compar. to other planning alternatives.	Has prim. been pres. in the final planning proposal presented for formal publ.consult. prior to final approval of the plan, although also to some extent in draft proposals presented dur. informal consult. earlier in the planning process.
Municipal plan for Reykjavik 2002-2024	<i>Plan/progr:</i> Comprehen. Land use plan for the municipality Reykjavik. <i>EA:</i> A more systematic assessm. of the general aims pres. in the plan and more detail. assessment of selected objectives than prev. done for mun.plans.	2001-2002	<i>Preparation:</i> Municipality. <i>Adoption:</i> Municipality and the Minister for the Environment	PBA, PR.	The plan is accom. by a special ER, discussing environm. impacts of the general aims of the plan and presenting a more detail. assessm. of select. plann.objectives, address. altern. and mitigat. measures.	Environmen. report prepared on the basis of a final planning proposal, presented at formal public consultation of the planning proposal preceding the final approval of the plan.

Table 1 cont.

Plan/ programme	Consult. w. environm. authorities at the scoping stage. (art. 2(b), art. 5(4) 2001/42/EC)	Consult. w. environm. authorities at the review stage. (art. 2(b), art. 6 2001/42/EC)	Consult. w. the public at the review stage. (art. 2(b), art. 6 2001/42/EC)	Decision making, the taking into account of the ER and consult. (art. 2(b) & 8 2001/42/EC)	Information on the decision (art. 9 2001/42/EC)	Monitoring (art. 10 2001/42/EC)
Municipal plans	In most cases only with the National Planning Agency.	The planning proposal itself is subject to consult. with environm. authorities according to the Planning regulations. The environm. assessment contained in or accomp. the planning proposal is then also presented to these authorities.	The planning proposal itself is subject to public consultation according to the PBA. The environmental assessment contained in or accompanying the planning proposal is then also presented to the public.	The PBA sets the framework for the municipalities' handling of comments made to a plan proposal during public consultation. These apply equally to comments made on the environmental assessment aspects of the planning proposal.	The PBA requires that municipal. advertise their decision.	Not included.
Municipal plan for Reykjavik 2002-2004	With the National Planning Agency.	The planning proposal itself was subject to consultation w. environm. Authorities according to the PR. The environm. Assessment accomp. The planning proposal was then also presented to these auth.	The planning proposal itself was subject to public consultation according to the PBA. The EA accomp. the planning proposal was then also presented to the public.	The PBA sets the framework for the municipal. handling of comments made to a plan propos. during public consultation. These apply equally to comments made on the EA aspects of the proposal.	The Planning and Building Act requires that municipal. advertise their decision.	Not included

Plan/ programme	Type of plan/ programme and environm. assessm.	Time of planning process/EA process.	Preparation/ adoption. (art. 2(a) 2001/42/EC)	Basis. (art. 2(a) 2001/42/EC)	Environm. report. (art. 2(b), art. 5, ann.I 2001/42/EC)	Timing of EA. (art. 4(1) 2001/42/EC)
Regional plans	<i>Plan/progr.</i> : Compreh. land use plans for two or more municipal. <i>EA</i> : See municipal plans above.	See municipal plans above.	<i>Preparation</i> : Regional planning committees appointed by municipal. <i>Adoption</i> : Municipal. and the Minister for the Environm.	PBA, PR.	See municipal plans above.	See municipal plans above.
Special regional plans ¹	<i>Plan/progr.</i> : Three special regional plans have been approved since the PBA came into effect. ² <i>EA</i> : Two energy plans acc. w. an EIS for the project acc. to the EIA Act. One plan for a fibre optic cable over the central highlands incl. general assessment of environm. impacts.	2000-2002.	<i>Preparation</i> : The company responsible for the development or plan/progr. in question. <i>Adoption</i> : The Minister for the Environment.	PBA.	Case: A high voltage power line in eastern Iceland: Plan proposal accompanied with an EIS. Case: A hydropower plant in east. Iceland: Plan propos. acc. with an EIS. Case: A fibre optic cable over the central highlands: See municipal plans above.	Only presented in the final planning proposal presented for formal public consultation prior to final approval of the plan.

¹ A plan dealing with particular development or plans for particular development, land use or protection within more than one municipality.

² One other example exists of special regional plans prepared according to art. 15 of the Planning and Building Act, a special regional plan for afforestation in Northern Iceland discussed elsewhere in this paper.

Table 1 cont.

Plan/ programme	Consult. w. envi- ronm. au- thorities at the scoping stage. (art. 2(b), art. 5(4) 2001/42/EC)	Consult. w. envi- ronm. au- thorities at the review stage. (art. 2(b), art. 6 2001/42/EC)	Consult. w. the public at the re- view stage. (art. 2(b), art. 6 2001/42/EC)	Decision making, the taking into account of the ER and consult. (art. 2(b) & 8 2001/42/EC)	Information on the de- cision (art. 9 2001/42/EC)	Monitoring (art. 10 2001/ 42/EC)
Regional plans	See municip- al plans above.	See municip- al plans above.	See municip- al plans above.	See municip- al plans above.	See municip- al plans above.	Not in- cluded.
Special regional plans	Primarily with the National Planning Agency.	See municip- al plans above.	See municip- al plans above.	See municip- al plans above, ex- cept that the National Planning Agency reviews comments made during public con- sultation.	-	Not in- cluded.

Plan/ programme	Type of plan/ programme and environm. assessm.	Time of planning process/EA process.	Preparation/ adoption. (art. 2(a) 2001/42/EC)	Basis. (art. 2(a) 2001/42/EC)	Environm. report. (art. 2(b), art. 5, ann.I 2001/42/EC)	Timing of EA. (art. 4(1) 2001/42/EC)
A special regional plan for afforestation in Northern Iceland	<i>Plan/progr.:</i> A special regional plan dealing with afforestation in Northern Iceland. <i>EA:</i> General environmental assessment of the plan's aims and objectives.	1999 – planning process ongoing	<i>Preparation:</i> The Board of the afforestation programme in Northern Iceland in consultation with the Planning Agency. <i>Adoption:</i> The Minister for the Environment.	The special regional plan is done according to art. 15 of the PBA. This is done voluntarily by the Board of the afforestation programme at the initiative of the National Planning Agency.	Will be included in the planning proposal.	At a late stage in the planning process, but has called for clarification of objectives and policy presented in the plan.
A framework programme on the utilization of hydro and geothermal energy resources	<i>Plan/progr.:</i> All relevant project alternatives for hydro and geothermal energy utilization. <i>EA:</i> Environmental assessment of project alternatives for hydro and geothermal energy utilization in Iceland.	1999 – planning process ongoing.	<i>Preparation:</i> An <i>ad-hoc</i> steering committee established by the Minister for Industry, in co-operation with the Minister for the Environment. <i>Adoption:</i> Has not been decided.	Decision of the Icelandic Government (+ included in the government's policy statement).	An independ. report where environm. imp. of project altern. for the utiliz. of hydro and geotherm. power are assessed, using multicrit. analysis. The result, a list ranking individ. power plant alt. w. regard to power output, econ. feasibility, macro and regional econ. impact, imp. on natural and cultural assets and impacts on land use.	NA.

Table 1 cont.

Plan/ programme	Consult. w. envi- ronm. au- thorities at the scoping stage. (art. 2(b), art. 5(4) 2001/42/EC)	Consult. w. envi- ronm. au- thorities at the review stage. (art. 2(b), art. 6 2001/42/EC)	Consult. w. the public at the re- view stage. (art. 2(b), art. 6 2001/42/EC)	Decision making, the taking into account of the ER and consult. (art. 2(b) & 8 2001/42/EC)	Information on the de- cision (art. 9 2001/42/EC)	Monitoring (art. 10 2001/ 42/EC)
A special regional plan for affor- estation in Northern Iceland	Yes.	Yes.	Yes.	Yes, at least to the degree prescribed in the PBA.	Not clear at this stage.	Not clear at this stage.
A framework programme on the utilization of hydro and geothermal en- ergy resources	Consultation Is carried out within four working groups work- ing under the steering committee dealing with different themes.	Not clear at this stage	Not clear at this stage	Not clear at this stage	Not clear at this stage	Not clear at this stage

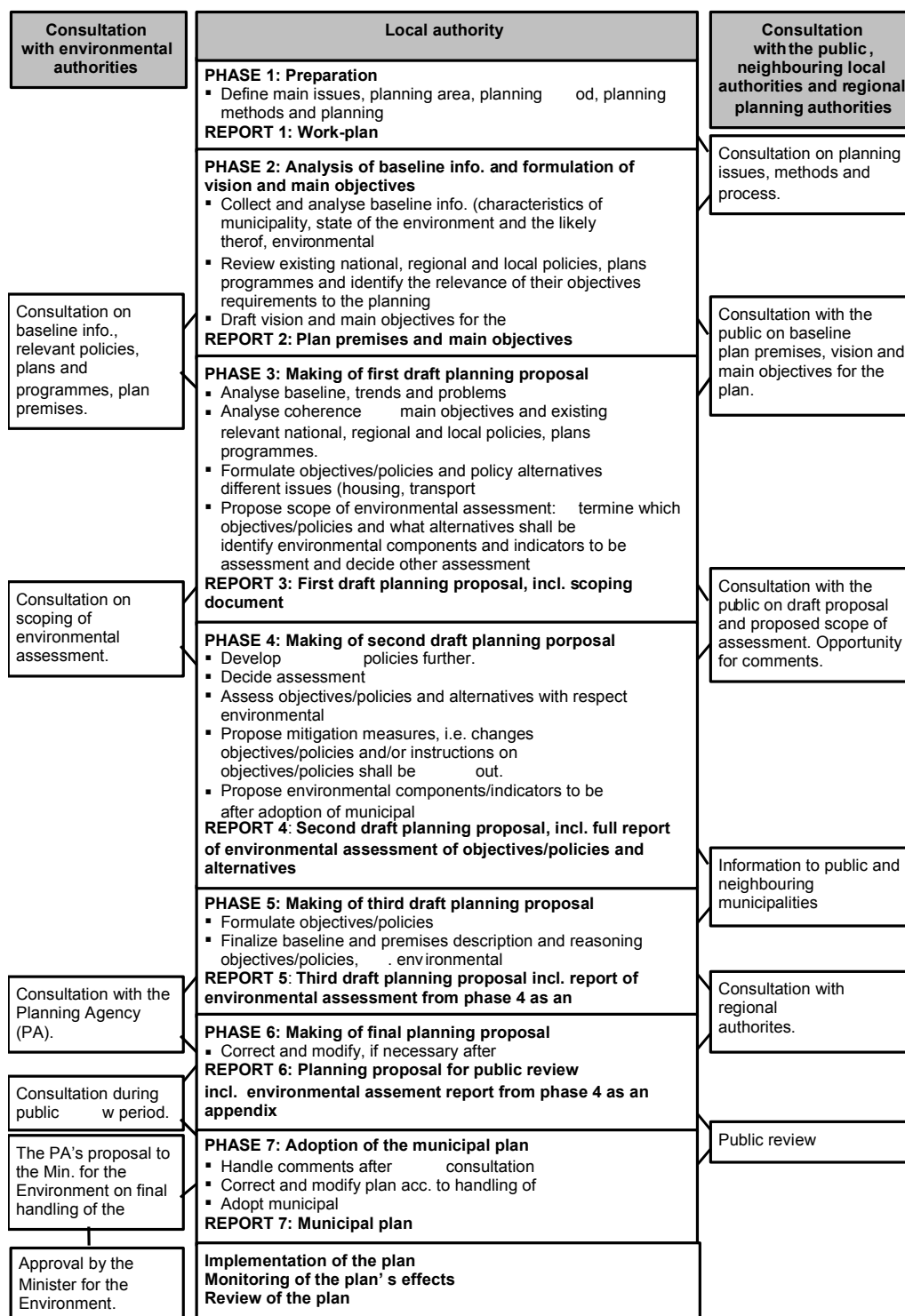


Figure 1. The municipal planning process with integrated environmental assessment.

4. Implementation of the EU Directive in Iceland

A preliminary assessment of which plans and programmes are likely to meet the criteria in article 3(2) of the EU SEA Directive performed in 2002 gives the following results (here listed under the sectors identified in article 3(2) of the Directive). The assessment is based on the interpretation of the terms ‘plan’ and ‘programme’, that a plan is a set of objectives for the implementation of policy and a programme is a set of projects in a particular area. Moreover, that article 3(2) of the Directive applies to plans and programmes that contain criteria or conditions that in some sense limit or direct succeeding development consents.

Table 2. Plans and programmes likely to be subject to EU Directive 2001/42/EC.

Agriculture:	Soil protection programme (Icel.: Landgræðsluáætlun). A 12 -year programme listing and prioritising projects. Prepared by the Soil Protection Agency. Adopted as a parliamentary resolution by the Icelandic Parliament. Basis: Legislative (currently a governmental bill).
Forestry:	Regional afforestation plans (Icel.: Landshlutaáætlunir/ landshluttaverkefni um skógrækt). Plans spanning four 10 -year periods with the general aim of afforestation on at least 5% of the region’s lowland. The plans set the framework for grants to individual afforestation projects in the respective region. Prepared and adopted by the respective board for each regional afforestation project appointed by the Minister for Agriculture. Basis: Legislative.
Fisheries:	None according to preliminary assessment.
Energy:	1) Acts for hydroelectric and/or geothermal power plants , where the Act itself constitutes i.a. a programme of hydroelectric and/or geothermal power plants, listing names, location and output energy of power plants which the Minister for Industry or the Icelandic Government may grant licences for. Prepared by the Ministry for Industry, adopted by the Icelandic Parliament. Basis: Legislative. 2) A framework programme on the utilization of hydro and geothermal energy resources (Icel.: Rammaáætlun um nýtingu vatnsafls og jarðvarma), ranking individual power plant alternatives with regard to power output, economic feasibility, macro and regional economic impact, impacts on natural and cultural assets and impacts on land use. Prepared by an <i>ad-hoc</i> steering committee established by the Minister for Industry, in co-operation with the Minister for the Environment. Adoption: To be decided. Basis: Administrative provisions (governmental decision, government’s policy statement).
Industry:	None according to preliminary assessment.
Transport:	Integrated transportation programme (Icel.: Samgönguáætlun). A 12 -year programme on transport infrastructure, with a more detailed 4 year programme, listing road projects, harbour and coastal defence projects and airport projects (name, location and cost). Prepared by the Ministry for Transport in co-operation with the Public

	Road Administration, the Civil Aviation Administration and the Maritime Administration. Adopted by the Icelandic Parliament as parliamentary resolution. Basis: Legislative.
Waste man.:	None according to preliminary assessment.
Water man.:	None according to preliminary assessment.
Telecomm.:	None according to preliminary assessment.
Tourism:	None according to preliminary assessment.
Town and country planning / land use:	1) Plans made according to the Planning and Building Act, i.e. regional plans, municipal plans, local plans and special regional plans (Icel.: Svæðisskipulag, aðalskipulag, deiliskipulag & sérstakt svæðisskipulag). Prepared by municipalities (municipal and local plans), regional planning committees (regional plans) and agencies responsible for the sectoral plan/programme in question (special regional plans). Adopted by municipalities (local plans), municipalities and the Minister for the Environment (municipal plans and regional plans) or Minister for the Environment only (regional plan for the central highlands and special regional plans). 2) National planning instruments Policy documents prepared by the Ministry for the Environment. Basis: Regulatory and administrative provisions. Parliamentary resolution on regional development prepared by the Ministry for Industry and the Regional Development Institute and adopted by the Parliament. Basis: Legislative.
Art. 6 or 7 of Directive 92/43/EEC:	NA in EEA.

5. Examination of selected aspects of the SEA process

In this chapter three elements of the SEA process will be discussed with reference to current practice and the requirements of Directive 2001/42/EC: Reporting, consultation and quality assurance. The discussion is based on work developed at the Planning Agency in Iceland on guidelines for municipal planning, where the implementation of the EU SEA Directive and integration of environmental assessment into the planning process is explicitly addressed. The development work has been carried out by the Planning Agency in co-operation with consultants ALTA and Levett-Therivel. The consultants' report to the Planning Agency (Riki Therivel 2002. Guidance on Strategic Environmental Assessment) is available on the Internet (www.skipulag.is). The Planning Agency's guidelines were published as a consultation draft in November 2002. The approach presented and described in the Planning Agency's draft guidelines is outlined in Figure 1. It should be emphasised that the process presented in Figure 1 is constructed around the requirements of the Icelandic Planning and Building Act and Planning Regulations and Directive 2001/42/EC, and can therefore not be directly applied in other

situations. It can however demonstrate some generalities that may have wider relevance, both in other countries and for other types of plans and programmes.

5.1 Reporting

Directive 2001/42/EC refers to an ‘environmental report’ as one product. This is also often the case in the SEA literature, where the ‘environmental report’ is often seen as the main and final product of the SEA process, preceding a final decision. This approach bears strong resemblance to an EIA process for projects, where the EIS is the main product of the EIA process, preceding the final decision on the development project in question. The situation is however somewhat different in the case of policies, plans and programmes. ‘The key output of SEA should be a better plan: one which is more sustainable, more internally coherent, and more defensible’ (Therivel 2002, p. 11). Furthermore, it is important also to recognise that the SEA process has different reporting moments, which one environmental report at one particular moment in the process cannot solve. The International Association for Impact Assessment (IAIA) has published performance criteria for SEA. Two of the elements listed there are that SEA shall ensure ‘... availability of the assessment results early enough to influence the decision making process and inspire future planning and that SEA shall provide’... ‘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’ (IAIA 2002). For these reasons, the key criteria for the design of the proposed municipal planning process presented in Figure 1 above regarding reporting were:

- To integrate the ‘environmental report’ as described in Directive 2001/42/EC into the planning proposal at different stages in the process (see reports 3-7 in Fig. 1).
- To establish clear relations between the baseline information gathered, the environmental components and indicators used in the assessment and the components/indicators to be monitored after the plan has been approved.
- To take into account that environmental authorities and the public are likely to hold information and viewpoints that are of relevance at the beginning of the planning process, such as on local information and aspirations and on information on other existing relevant policies, plans and programmes, their objectives and requirements (see consultation on report 2 in Fig. 1).

- To consult environmental authorities and the public on the scope and methods of assessment (see consultation on report 3 in Fig. 1).
- To take into account that the final planning proposal, put out on public consultation, cannot be expected to be the forum for the assessment of different alternatives. The final proposal is to have taken on board the findings of the assessment and altered and modified the different planning objectives/policies in line with the assessment findings. Thus the assessment findings need to be published earlier in the planning process (see report 4 in Fig. 1).
- To acknowledge that the ‘environmental report’, i.e. the full assessment and comparison of different policy options should accompany the final planning proposal, but not be a part of the planning proposal, as the final planning proposal is expected to be a result of the assessment made earlier in the planning process (see report 6 in Fig. 1).

The Planning Agency’s draft guidelines propose five reporting moments (see Figure 1) before a final planning proposal is presented in the formal six weeks public review period required by the Planning and Building Act. In each report different aspects or stages in the environmental assessment of the plan are presented. In report 2, the state of the environment is described. In report 3 the scope and methods of environmental assessment are proposed, such as what objectives/policies and alternatives shall be assessed and what environmental components and indicators will be used and how the assessment should be conducted. In report 4 the assessment of objectives/policies and alternatives is presented as is a proposal on mitigation measures and a monitoring plan. Report 5 includes an environmental assessment report from phase 4 as an appendix. The ‘environmental report’ accompanying the final planning proposal will therefore include a description of how the assessment was carried out, as well as the main findings of the environmental assessment carried out in earlier phases of the planning process.

The EU SEA Directive’s requirements on reporting are partly covered in the Icelandic Planning and Building Act and the Planning Regulations. The Planning and Building Act requires that the environmental effects of a municipal plan are documented in the plan. Article 5.1 of the Planning Regulations states that the environmental assessment of the planning proposal shall be documented in the plan, including a description of how the assessment has been taken into account in the final planning

proposal. There are, however, no requirements on reporting at the scoping stage of the environmental assessment (see report 3 in Fig. 1).

One issue that comes up in the SEA of planning proposals is the 'ownership' of the assessment, i.e. who's assessment is presented. In some cases consultants may be hired to carry out the assessment. Then the assessment presented in, or accompanied with, a planning proposal may not necessarily be the planning authority's own assessment of the planning proposal's impacts. It is important to keep it clear to the reader (i.e. the public and environmental authorities) what the local authority's proposals and assessment are, and what may only be explanatory material containing others' views and/or assessments.

5.2 Consultation with the public and the environmental authorities

The importance of the direct and meaningful involvement of the public and environmental authorities from early on in the SEA process is widely recognised in the SEA literature and has thus been taken on board in Directive 2001/42/EC. In the IAIA's performance criteria for SEA the following elements are identified: that SEA '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 requirements and ensures sufficient access to all relevant information' (IAIA 2002). The key criteria for the design of the proposed municipal planning process presented in Figure 1 above regarding consultation were:

- To build on the existing requirements of the Planning and Building Act and Planning Regulations for public participation and consultation during the preparation of a municipal plan.
- To combine existing requirements and practice with the requirements of Directive 2001/42/EC, creating a continuous process of information to and consultation with environmental authorities and the public on the different aspects of planning and environmental assessment.
- To secure transparency and accountability.

Consultation with the public

The main consulting moments with the public in the proposed planning process are on: a) planning issues, baseline data, vision for the municipality and the main objectives of the planning work (report 1 and/or 2), b) first draft proposal of objectives and policies as well as on the proposed scope of environmental assessment (report 3), c) second draft proposal of

objectives and policies including assessment of their environmental effects (report 4), and d) on the final planning proposal (report 6).

The process aims for a more effective and earlier consultation with the public throughout the process than current practice allows, i.e. that the public will receive or have access to reports at specific stages of the planning process which will give people more opportunity to get involved in the planning work. In current planning practice a planning proposal is presented to the public at one or two stages in the process apart from the formal public review period which is required by the Planning and Building Act, e.g. in the beginning on planning issues and in the middle or close to the end of the process when a draft or final proposal is ready. According to the Planning and Building Act 'every effort shall be made to seek the viewpoints and proposals of the inhabitants and others who have interests to defend regarding the formulation of policy and objectives'. Apart from the formal six weeks public review period, only one specific moment for public presentation regarding a municipal plan is defined. Article 17 of the Act states that before 'a local authority makes its conclusion on a municipal plan proposal ... the proposal and its objectives and premises shall be presented to the inhabitants of the municipality at a public meeting or in another satisfactory manner. The presentation shall be advertised in a conspicuous way.' (see consultation on report 5 in Fig. 1).

These general and specific requirements on public consultation in the Planning and Building Act are taken further in the Planning Regulations by stating that efforts shall be made to formulate policy in close cooperation with inhabitants and other interested parties *during the whole planning process* and that the planning work shall be introduced e.g. by advertisement, circulars or meetings, at the start of the planning process (see consultation on report 1 in Fig. 1).

In the Planning Agency's guidelines it is considered important to involve the public at the scoping stage of the environmental assessment, although this is not explicitly required by the EU SEA Directive.

To secure transparency and accountability in the process the draft guidelines suggest that the results of a previous consultation, such as consultation on the scope of environmental assessment, are included in succeeding documentation in the planning process.

Consultation with the environmental authorities

In the process suggested in the Planning Agency's draft guidelines, the main consulting moments as regards the environmental authorities are on: a) baseline information and relevant existing policies, plans and programmes (report 2), b) the proposed scope of environmental assessment, i.e. on objectives/policies and the alternatives to be analysed and assessed,

scope and the level of detail of the information to be included in the assessment, and the environmental components and indicators to be used in the assessment as well as other assessment methods (report 3) and c) on the final planning proposal during the formal six weeks public review period which is required by the Planning and Building Act (report 6). In addition, the Planning Agency will also be consulted before the formal public review period, which is according to the Planning and Building Act (see report 5 and also discussion on quality assurance below).

This process is intended to change current practice with respect to consultation with the environmental authorities. Typically, environmental authorities have been formally consulted on the final planning proposal either shortly before or during the formal public review period. Before that time there is perhaps a level of informal or semi-formal communication between the municipality/planning consultant and the environmental authorities. According to the proposed process the environmental authorities will receive draft-planning proposals three times in the process instead of only once. The first two consultation moments (i.e. a) and b) above) could be merged into one and still fulfil the EU SEA Directive's provision on consultation with environmental authorities when the scope and level of detail in the strategic environmental assessment is decided upon (art. 5(4) of the Directive). It is however suggested that this be done in two steps as it was considered important to have comprehensive and correct baseline information before policy formulation starts.

'Environmental authorities' are not defined in the Icelandic Planning and Building Act, though the Planning Regulations do list the public authorities that shall be consulted in the planning process. The Planning and Building Act's/Planning Regulations' provisions on consultation need to be reviewed with regard to the EU SEA Directive's provision on consultation with environmental authorities on the scope and level of detail in the strategic environmental assessment (art. 5(4) of the Directive).

5.3 Quality assurance

Even though the quality of SEA is addressed in Directive 2001/42/EC, the Directive does not require specific quality assurance mechanisms to be inserted into the SEA process. The importance of quality assurance in SEA has been discussed to some extent in the SEA literature. Thus, Sheate et al (2001) for example identify independent review bodies as one of the key success factors for SEA. Verheem and Tonk (2000) identify quality review as one of generic SEA principles and that an SEA process shall ensure that 'the quality of process and information is safeguarded by an effective review mechanism'. Moreover, the newly founded International Commission for Impact Assessment, who's role it is to provide independ-

ent quality review in environmental assessment, demonstrates how widely recognised the need for quality assurance mechanisms in the practice of environmental assessment is. In the IAIA's performance criteria for SEA, one of the elements listed to ensure accountability is that SEA 'is subject to independent checks and verification' (IAIA 2002). The key aspects of the proposed municipal planning process presented in Figure 1 above regarding quality assurance are to build on the existing requirements of the Planning and Building Act and Planning Regulations for quality review. In the municipal planning process prescribed in the Planning and Building Act the Planning Agency has a role as quality assurance mechanism throughout the planning process; informally in the first part of the process, but with formal review of the planning proposal and planning process in the second half of the process. The system and the practice of quality assurance can be extended to include quality review of environmental assessment scoping (see phases 3 and 4 in Figure 1) and to include quality review of environmental assessment methods, findings and treatment of results (see phases 5-7 in Figure 1).

6. Discussion – strengths and weaknesses

Building on information presented in the previous chapters the following characteristics and elements can be identified which are of relevance for the implementation of SEA in Iceland:

1. The majority of the environmental assessments that have been conducted on plans and programmes in Iceland have come about due to legal requirements in the Planning and Building Act, introduced in 1998. Voluntary pilot projects have though played an important role in introducing SEA and in the further development of suitable methods.
2. At the current time of writing, plans, programmes or policies that would undoubtedly fall beyond the scope of Directive 2001/42/EC, but which are thought to be likely to have significant environmental impacts, and should thus be made subject to SEA, have not yet been identified. Rather, the requirements of the Directive seem to be a logical continuation of the practice of EIA based on Directive 85/337/EC. Sheate et al (2001) point out that the '... application of SEA at plan and programme level as a result of the SEA Directive is likely to expose policies to greater scrutiny, just as EIA has exposed decisions made at plan and programme level. ...' (p. 91)
3. Nearly all of the examples presented in chapter 3 of this paper are spatial planning SEAs on the municipal or regional level. If that is

compared to the findings of chapter 4 of this paper, it is apparent that limited experience is available on SEA in many of the sectors and plan-making arenas where plans and programmes will become subject to the requirements of Directive 2001/42/EC. Furthermore, limited experience exists of planning and policy-making in some of the sectors that will become subject to the requirements of Directive 2001/42/EC. There is however evidence of increased emphasis on formal policymaking within these sectors, as can for example be seen in new planning instruments that have been introduced in the last few years, e.g. in Acts on an integrated transport programme and regional afforestation programmes.

4. In the cases presented in chapter 3 the environmental assessment has in most cases been carried out in the context of being incorporated into a planning process according to the Planning and Building Act, where there are clear rules concerning public consultation and decision-making. These do however have to be reviewed, if they are to fully stand up to the EU SEA Directive's requirements on all aspects of the process, i.e. the report, consultation, decision-making, information on the decision and monitoring.
5. The planning/SEA process discussed and proposed in chapter 5 of this paper refers to municipal spatial planning. It is important to acknowledge that municipal spatial planning has much stronger prerequisites for the implementation of SEA than many other plan- and programme-making arenas. The introduction of SEA into the municipal spatial planning process does however call for some changes, both in the legislative/regulatory framework and in planning practice. To other plan- and programme-making where no or limited consultation or documentation has been conducted, the implementation of SEA will pose a much greater challenge than it does to municipal spatial planning.
6. In the first chapter of this paper the assumption was stated that SEA has an important role to play in making planning better equipped to contribute to sustainable development. SEA's ability to contribute though is limited by the plan-making culture and plan-making requirements. A comprehensive network of plans and programmes with horizontal and vertical connections can be seen as a necessary prerequisite for SEA to be able to contribute meaningfully to sustainable development. With the introduction of the Planning and Building Act in 1998, municipal planning was established as the backbone of the land use planning system in Iceland. Plan making at the national level

has not been prominent, and neither has regional planning, as no regional administrative level exists in Iceland. As has already been noted, evidence exists of an increasing emphasis on plan making at the national level, in particular in respect of the new legal requirements for sectoral planning. Moreover, it is increasingly recognised that plan-making at the national level is in need of co-ordination, both horizontally between the different plan-making agencies acting on the national level, but also vertically, with the plan making carried out by the municipalities on the local level (Theodorsdottir 2003). SEA is believed to be an important tool to improve these planning processes with respect to environmental considerations, transparency and consultation, but can not alone create links between the different spatial authorities, if the plan-making framework is not already in place.

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The Plans and Programmes Directive¹ in Norway

By Martin A. Hanssen

Introduction

This paper attempts to do the following:

- Give an introduction to the current situation concerning Strategic Environmental Assessment (SEA) in Norway.
- Give a brief interpretation of some of the criteria in Directive 2001/42/EC (the PP-Directive) for the plans and programmes (PP) that are covered, and estimate which PPs these are in Norway.
- Present the research in Norway on the application of SEA for planning pursuant to The Planning and Building Act.
- Present the proposal on the implementation of the PP-Directive into The Planning and Building Act from a government commission that has been given the mandate to propose reforms to The Planning and Building Act (*Planlovutvalget*).
- Discuss some questions related to ‘screening’ and ‘the determination of significant environmental effects’ that arise from the proposed changes.
- Briefly refer to works on Environmental Assessment and sustainable development from Norway.

Strategic Environmental Assessment in Norway – the current situation

Here, we will begin with a short overview of the requirements and guidelines for Strategic Environmental Assessment (SEA) in Norway. By SEA we mean ‘the formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme and its alternatives,’ (Glasson et al 1999:402). The PP-Directive is often referred to as the ‘SEA-Directive’, and thus, has its relevance in the field,

¹ EU directive on the assessment of environmental effects of certain Plans and Programmes (PP) (Directive 2001/42/EC).

which is here defined as ‘SEA’. To what extent this is actually the case remains however a subject of investigation.

Central government (national) level

Requirements: A government Administrative Order (*Utretningsinstruksen*) states that documents presented to parliament and to the cabinet shall be subject to environmental assessment (EA) of their significant environmental effects. The Public Administration Act (*forvaltningsloven*), which covers all public decision-making except that by the parliament and the courts, states that any proposal shall be as informed as possible. The Planning and Building Act, pursuant to which also central government planning is taking place, has no explicit formal requirement for SEA.

Guidelines: Issued for the Administrative Order in 2000 (5 pages of substance). No guidelines for The Act on Public Administration. The Planning and Building Act has guidelines for planning (and thereby partly for EA) in which central government undertakes the role of planning authority, which was originally left to the municipality. There are no guidelines for other kinds of planning at the national level (oriented towards ‘policy provisions’ and the ‘banning’ of certain actions).

Comment: The Administrative Order and The Act on Public Administration are very brief on the matter of EA, and only the first is explicit regarding ‘the environment’. With regard to The Act on Public Administration, an interpretation is needed to show that the environment is covered by the requirement to assess consequences. There is clearly no intention to spread the coverage of EA-norms with this act. As such, improvements to the Planning and Building Act, with regard to SEA for planning at national level pursuant to this act, have not been addressed in the ongoing and extensive work of reforming The Planning and Building Act.

Regional and local authorities

Requirements: In most cases of formal planning (including non land-use related sector planning), authorities at this level will perform planning in accordance with the Planning and Building Act. There are few other formal frameworks. However, this act is only focused on the ‘process’, with its requirement for SEA. There is no requirement for the documentation of consequences. The Public Administration Act thus also applies.

Guidelines/Practise: With respect to EA, guidelines are only developed for the ‘process’, not for the documentation of consequences.

Comment: Relatively extensive changes to The Planning and Building Act are being prepared, and the new act will probably more than comply with the PP-Directive (extensive scoping-procedures are being suggested).

Plans and programmes covered by the PP-Directive

To determine which PPs are covered by the Directive in Norway, we will first present the main criteria for this in the Directive, with some interpretations. Then, we will go on to apply these to PPs in Norway.

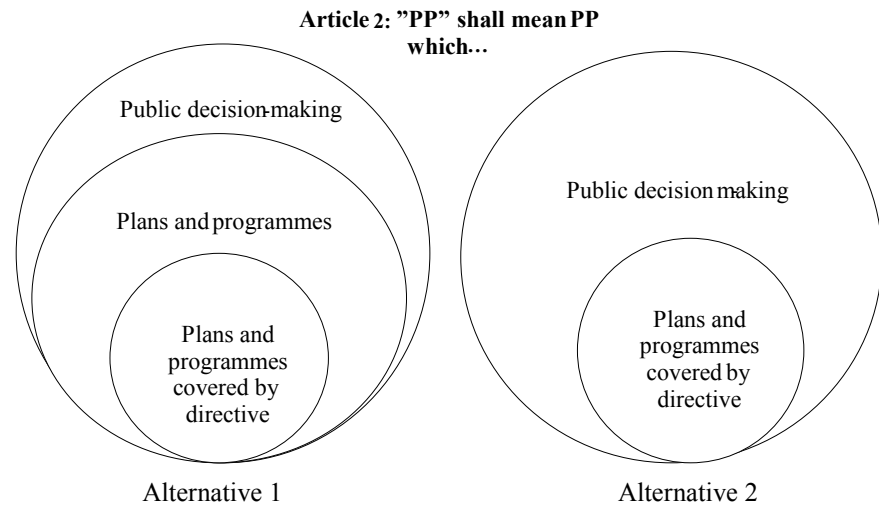
The PP-Directive – Articles 2 and 3

The PP-Directive has an extensive set of criteria that shall be used to determine which PPs are covered. These have however changed considerably from earlier drafts. The analysis done by Hanssen (1999) is therefore of little value in this light. Space constraints permit room for only a brief interpretation of some of the key criteria, supplemented by the draft guidelines for the implementation of the PP-Directive.

The PP-Directive puts us within the domain of ‘public decision-making’ (Art. 2 (a) first point), and only PPs that are required by legislative, regulatory or administrative provisions are covered (Art. 2 (a) second point). ‘Required’ by the provisions means, according to the guidelines (p. 7), that there is no discretion as to whether or not to draw up PPs. Not only the PPs required for an authority to *adopt*, but also PPs required for that or another authority to *prepare*, are covered.

Quite surprisingly, we find that the PP-Directive does not define what PPs are in the first place. What we have been told is that PPs are part of public decision-making (Art. 2 a), and that the PP-Directive covers only ‘certain’ PPs (the heading of the PP-Directive). Nor is it explicitly communicated whether the PPs *not* covered are only those mentioned explicitly (Art. 4 para. 8), or whether we are dealing with a larger concept of PPs, in which the PPs covered are only a (small?) part thereof (illustrated in Figure 1). The PP-Directive seems however to imply the latter.

Figure 1



Is this issue interesting in the context of finding out exactly which PPs are covered? The answer to this can only be gauged on the basis of the possible need to determine that certain aspects or practices of public decision-making are not covered by the PP-Directive, because they do not fall within the wider concept of PPs, which are independent of the criteria of Articles 2 and 3. For the practical purpose of ‘muddling through’ on the search for PPs covered by the PP-Directive, it would thus be useful at least to know where *not* to look. Even more importantly however, if the criteria of Articles 2 and 3 do not make any attempt to determine what PPs are, this becomes a crucial exercise. The heading of Figure 1 refers to the introductory formula of Article 2(a), which, suggests that PPs are something that are being tested against the criteria, not determined by them.

Article 3 paragraph 2(a) lists a number of sectors, and some types of planning that fall within the scope of the PP-Directive, *if* they set out the framework for future development consent for projects under the project Directive (85/337/EEC). The guidelines tell us that ‘set the framework’ means that, in some sense, the PPs guide the way that the consenting authority must decide on an application for consent.

The Habitat-directive (92/43/EEC) (Art. 3 para. 2(b)) does not come under the EEA-treaty, which has been brought to the attention of the relevant international authorities.

Article 3, paragraph 3 deals, firstly with the issue of PPs determining the use of small areas on the local level, and states that they only require EA when they have significant environmental effects. How this should be dealt with in relation to screening is a major issue. We will come back to this in relation to the proposed screening-mechanisms in The Norwegian Planning and Building Act.

Article 3, paragraph 4 opens up the scope of the PP-Directive by saying that PPs other than those referred to in paragraph 2, which also sets the framework for future development consent are covered, if they are likely to have 'significant environmental effects'. Since there is no automatic obligation for EA, screening-mechanisms will have to be established for PPs that come under article 2.

Article 3, paragraph 5, specifies the way in which screening decisions are allowed to take place for PPs under paragraphs 3 and 4. To be able to specify the types of PPs that are covered will greatly simplify screening procedures, because you do not have to consider every single PP individually. However, according to the guidelines, you cannot exclude whole classes from the PP-Directive. I will later show how this approach has been proposed with The Planning and Building Act.

What plans and programmes are covered by the PP-Directive in Norway?

With only a draft version of the PP-Directive (COM (96) 511) in existence at the time Hanssen (1999) looked at planning² regulations and practice in all of the sectors mentioned in the adopted version of the PP-Directive (excluding fisheries). The sectors reviewed were, agriculture (including forestry, and the keeping of reindeer), aquaculture, transport (roads, railroads, harbours, and airports), energy (hydropower, power lines, and other installations for the production of energy), waste management, water resource management, industry (quarrying/mining and petroleum production), telecommunications and tourism, as well as town and country planning and land use planning. No other sectors were included in the study. This implies that a large number of PPs in Norway, possibly covered by the Directive, have not been studied in order to determine whether they were in fact covered.

² No distinction between 'plans' and 'programmes' was established. Therefore, only the first of the terms is used.

The study shows that sector plans adopted by authorities other than those in accordance with The Planning and Building Act never ‘set the framework...’ in the sense of the PP-Directive³, although it is highly influential in determining what is being adopted by municipal planning authorities or funding authorities later on. It is also very rare among the sectors studied that planning is required by legislative, regulatory or administrative provision.

In Norway, we see, for the sectors included in the study, that planning which ‘set[s] the framework...’ for projects is adopted pursuant to The Planning and Building Act. According to this act, planning aimed directly at public decision-making for land use, is to be adopted by the political council of the municipality. When other project-planning authorities, at the local, regional or national level (mostly sector authorities) are in need of such decision-making, they will conduct planning that becomes a more or less structured input into planning processes pursuant to The Planning and Building Act⁴.

For these sectors, taking into account the fact that planning here relates to planning pursuant to The Planning and Building Act, we can conclude that all planning by these sector authorities that is covered by the Directive, takes place pursuant to The Planning and Building Act, not in any other of the regulatory systems associated with the sectors themselves. This would not necessarily be the conclusion for other sectors that were not included in that previous study. But, differences will only exist to the extent that sector regulations override the principle that the use of land is determined according to The Planning and Building Act.

The most pressure is applied to these conclusions from the Guideline (p.8) which state that ‘set the framework...’ means that the PP ‘contains criteria or conditions which in some sense guide the way that consenting authorities must decide....’ The implications of ‘in some sense’

³ ‘...guide the way consenting authorities must decide an application for consent’ (Guidelines, p. 8).

⁴ However, we do see that national authorities (particularly the Parliament) will often ignore the needs of later planning pursuant to The Planning and Building Act (Gardermoen is a good example of this (Stenstadvold 2000)), and will also place rigid expectations on these planning authorities. This does not however change the legal position that these authorities are authorised to plan differently. Should that happen, the national authority could not only change the plan, but could also legally seize planning authority pursuant to The Planning and Building Act in areas it does not originally possess. All such interferences are done according to The Planning and Building Act, and with no legal reference to previous planning efforts.

are probably wide, and they have not been elaborated on beyond what we will call 'implications for land use'.

The Planning and Building Act offers several planning types, though not all would be candidates to be covered. In accordance with the 'set the framework...' and 'required by...' criteria (which both have to be present), several of them are not. This would be the case for the central government planning (planlegging på riksnivå), county planning (fylkesplanen) and municipal master planning (kommuneplanen), in all their forms. We will return to which planning measures, according to The Planning and Building Act, are covered by these two criteria, and how this could be determined on a case by case basis, or by specifying types, which that are covered by the obligation relating to SEA.

Changes to planning with the PP-Directive

What is the existing system of SEA in The Planning and Building Act? What changes will have to be made to planning pursuant to The Planning and Building Act in order to implement the PP-Directive? In this chapter we will address the planning process, regardless of what plans are covered, or how they should be selected.

Formalities

Consultation and participation by the public and competent authorities are a much stronger side to The Planning and Building Act, in terms of SEA, than the requirements for the content and use of the actual environmental assessment document. Of the latter, there is actually nothing of note written therein.

With respect to participation, the PP-Directive will not be making any contribution to the process as it is. However, improvements to documents as a result of requirements derived from the Directive will probably benefit participation. The Directive demands that the environmental report has a certain content, and that this content is taken into account in decision-making. Requirements such as this will be new to The Planning and Building Act when introduced. They are also the only new elements to be derived from the Directive in terms of how planning is actually done. The directive does however have some requirements on what happens after planning adoption. This involves giving information about the plan and the monitoring of significant environmental effects.

The public committee that has been assigned to propose reform to The Planning and Building Act has also suggested a number of *other* improvements to the process. They have suggested that *planning programmes* be made the subject of public hearings in the early stages of the process. This also involves SEA-scoping (the selection of issues to be

assessed). The PP-Directive does not require public participation in scoping. Thus, the suggestion is not limited to implementation of the Directive.

Thus far the approach to planning, pursuant to The Planning and Building Act, adopted here has not taken into account the fact that it comes in various types. The reality as such is that not all of it is covered by the PP-Directive. To determine this however requires a closer look. We will return to the subject of how SEA-screening has been linked to the various types of planning in The Planning and Building Act, in an attempt to implement the PP-Directive.

Practical experiences

A number of test cases have been carried out in Norway over the last 7-8 years in order to study the planning programme (with SEA scoping) and other aspects of SEA for planning pursuant to The Planning and Building Act in action. The aim of this has been to see how SEA works in this setting⁵. The Ministry of the Environment has initiated these cases, which have been partly managed and reported, and partly only reported, by the same consultancy (Asplan Viak 1998, 2003).

One should note however that we do not have full correspondence between the SEA-model that has been applied in these cases, and the requirements of the Directive. The planning programme is not required by the Directive, while this is one of the main elements in the SEA-model. In addition we have a number of other elements from the Directive that have not been tested within the context of this model. These are requirements for the content of the environmental report, and monitoring of significant environmental effects. Conclusions from these projects relate to the SEA-model as it has been applied. In formulating experiences with SEA that are relevant for issues relating to the implementation of the Directive, this should be taken into account. Here, we will not carry these differences further, instead merely referencing the findings from these test-projects, and other studies.

The Nordic Council of Ministers has issued two extensive comparative studies (1996, 1999), which both include Norwegian planning cases pursuant to The Planning and Building Act, and others. Some of the processes studied have been carried out in accordance with 'SEA-principles', more or less. They were not however cases of 'experimental' character, in which consultancies or authorities tested the SEA-model. The reporting from these cases tended to be more suggestive than conclu-

⁵ Experiences from other SEA areas than The Planning and Building Act will not be included in this paper.

sive, while it seems to rely as much on normative views known by the authors, than on actual findings. To the extent that there are findings they coincide with those of Asplan Viak's (1998, 2003).

Asplan Viak (1998, 2003) on the other hand reported on cases in which a flexible SEA-model was applied systematically, and he comes up with a number of quite firm conclusions. In these studies certain adaptations to the SEA-principles have been used, and it has been found that these can be adjusted to various municipalities and planning situations to produce good results (2003). Viak's study thus found that an earlier participation by the public and authorities, and the documentation of environmental consequences, made a contribution to clarifying the environmental consequences of the plan. However, problems with the question of how knowledge of the consequences is used to produce possible solutions and alternatives are revealed. It is also found in one case that methods of assessing the consequences of building-projects find their way into the assessment work related to the plan. This has produced some inadequacies in the assessment work of that particular plan, because the focus has not always seemed relevant.

A model for implementing the two EA⁶ - Directives in The Planning and Building Act has wide implications for the role of the PP-Directive in Norway

The public committee assigned to propose reform to The Planning and Building Act has come up with suggestions for a division of labour between the two directives within the act (NOU 2001:7). Since the central focus of this paper is the PP-directive, we will only make references to the project-Directive to the extent that this is necessary to explain the division of labour and its implications for the implementation of the PP-Directive.

The Norwegian Planning and Building Act encompasses a multi-tiered system of planning, forming a hierarchical structure. What 'hierarchy' means in this context is complex, and given constraints on space we will not elaborate further here. Nevertheless, NOU 2001:7 uses a distinction, which partly serves the purpose of determining the division of labour between the two directives, thus partly justifying it. The distinction is between 'master planning' and 'municipal development plans'. 'Master planning' includes 'county planning' and 'municipal master planning', while 'municipal development planning' (*reguleringsplan*) only comes in

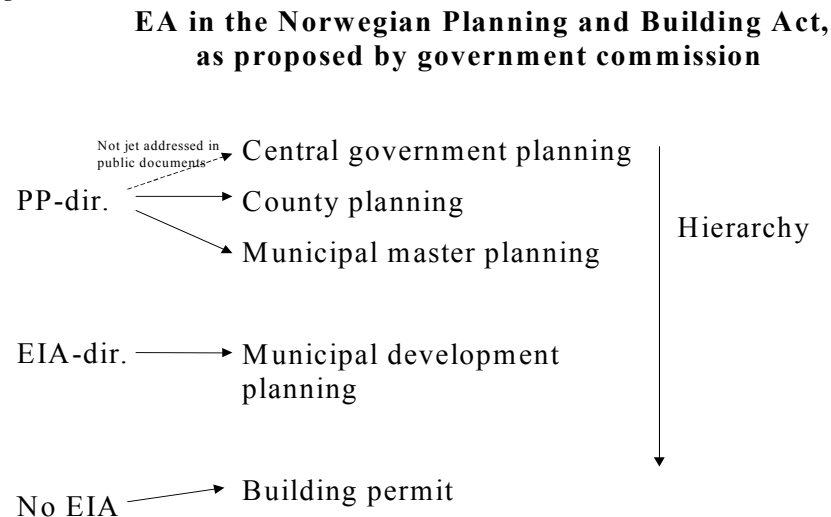
⁶ The term 'Environmental assessment' (EA) covers the terms, SEA and Environmental Impact Assessment for building-projects (EIA).

one form, the second most detailed in The Planning and Building Act. Planning at national (central government) level is not addressed.

The division of labour that is introduced consists of the PP-directive only being implemented with regard to master planning, and the project-Directive being implemented with regard to municipal development planning. This is illustrated in Figure 2.

As it does not include municipal development planning among the forms that are covered by the PP-directive, this approach strongly contradicts our previous analysis which notes that no ‘master planning’ is covered, and that ‘municipal development plans’ might be covered (meaning that some of them are covered, and that this will have to be decided on by

Figure 2



screening). We will return to how we deal with this situation below.

Screening and significance determination

Screening as a critical issue in EA

The possible hardships of EA-screening are offered little attention in the international debate on EA. As regards the EIA-system in Norway this is one of the major issues with respect to how well it is considered to work, and thus also of its legitimacy. It is generally thought in Norway that screening should be predictable, and simple. This has also been expressed by the public commission in its initial proposal (NOU 2001:7, p. 318).

This represents a special challenge, and thus this issue should be given some further attention.

With the above model (Figure 2), achieving simplicity is the major aim, and the model should first and foremost be understood in this light. The aim of applying the directives to the letter thus becomes, given the premises of this model, secondary. This is at least a possible perspective if the previous point, that some municipal development plans are covered by the PP-Directive, is correct.

One should also view the model in light of the fact that it represents the first and most determinant part of the screening mechanism for EA in The Planning and Building Act. In the following paragraphs however we will elaborate further on the issues of screening and significance determination, not only based on the premises that the model gives, but also based on the assumption that some municipal development plans are also covered by the PP-Directive.

Screening in The Planning and Building Act, in light of the PP-Directive

The clear-cut division of labour in the model delivers a significant contribution to the simplification of screening mechanisms in The Planning and Building Act, though it does also entail a number of problems, if some municipal development plans are indeed covered.

Municipal development plans

The most important screening-implication of the Figure 2-model, with regard to the PP-Directive, is that *no* municipal development plan will be made subject to SEA-requirements in accordance with the PP-directive. These plans, when they have significant environmental effects, will undergo EA in accordance with the EIA-Directive. The primary aim here is to keep EIA focussed on this level of decision-making, and the primary *hope* is that such an EIA-system can take care of EA for these kinds of plans when they are covered by the PP-directive. It is thus more than likely that we will in the end create a hybrid system, in the sense that both directives will play a part in the screening mechanism for municipal development plans, and thus we will discuss two possible models for this.

A hybrid system seems necessary here because the model in Figure 2 implies that even though a number of municipal development plans would be covered by the PP-directive, they would not undergo an EA unless they were also covered by the EIA-Directive. But even in this case, they would only undergo EIA, not SEA (as required by the PP-Directive), which would still be problematic.

The first possible hybrid model could be a system to determine whether each single municipal development plan should be screened according to criteria that comply with the PP-Directive *or* whether it should be screened according to criteria that comply with the EIA-Directive. This would involve categorising⁷ municipal development plans to determine under which Directive they are subject, before the actual screening by criteria derived from each Directive would be used. This pre-screening categorisation is illustrated by the dividing line in Figure 3⁸. The main challenge here is to create categories that allow plans that can be said to represent some kind of development consent for projects to be screened by criteria from the EIA-Directive, and for this to be in compliance with the PP-directive, which covers plans that set the *framework* for development consent for such projects. This is probably not easy, but it is a challenge that the two Directives impose on every Member State, whether they solve it by implementing two Directives in *each of their* established categories/forms of decision making, or whether it is done *within one* category/form, as would be the case here. This tension between what is covered by each of the two Directives, a tension that spans over, and, in this case triggers, a sub categorisation of municipal development planning, is illustrated with the arrow in Figure 3.

It would be possible to object to the line adopted in this discussion by saying: if some of these municipal development plans are covered by the PP-Directive, why not develop an SEA-system that allows for *all of them* to be screened in accordance with the PP-Directive? In this case we would have all municipal development plans screened by both mechanisms (if EIA is kept with this plan), since there are none that will only be screened by one of them. This would give us Figure 3 without the dividing line. That would increase the tension illustrated with the arrow, because the two screening mechanisms would both apply to the same lot of plans. This tension would however be eased if one accepts the possibility that plans could be covered by both of them. This whole situation is

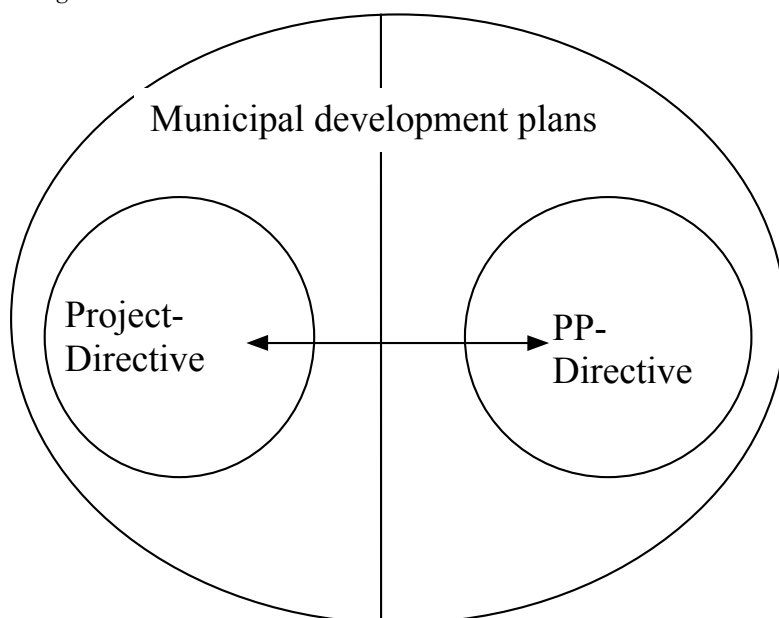
⁷ No such categories are in use today.

⁸ Let me stress that Figure 3 is not a part of any proposal, just an illustration of how problems with the existing proposal (Figure 2) can be corrected.

illustrated in figure 4. Note should however be taken of the fact that such a schema merely introduces the troublesome problem of managing two sets of requirements with the same plan, indiscriminately of what the plan represents in terms of being a framework for, or giving, development consent.

For those who want to keep EIA⁹ and SEA as two separate matters, this possible overlap, and screening by an EIA-mechanism and a SEA-

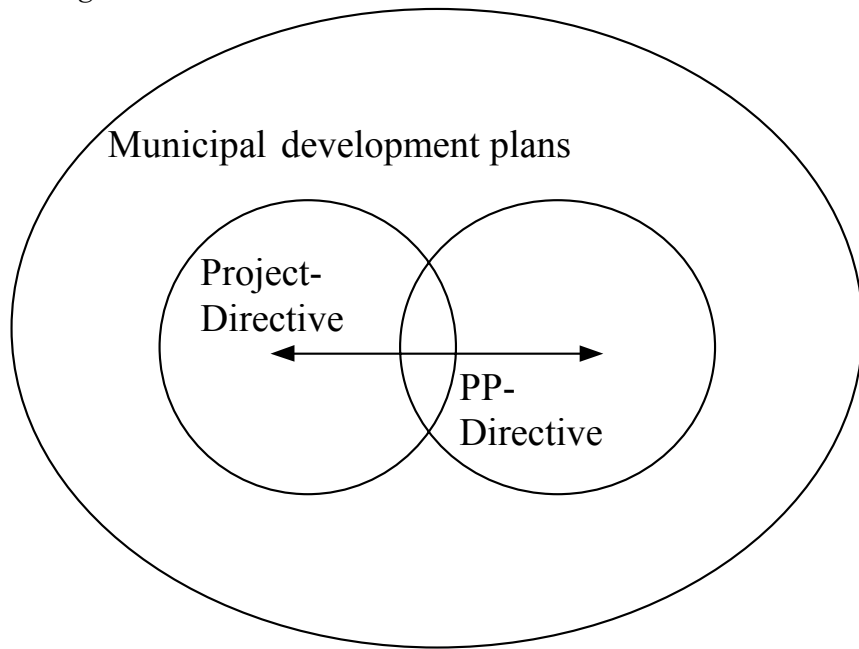
Figure 3



mechanism within the same space, becomes problematic. Moreover, it becomes an issue of how the EA-requirements in overlap cases should be practised. This is not necessarily difficult, since the EA-requirements of the two Directives are quite similar. These issues become even more critical however on introduction of the third 'hybrid-model', in Figure 5. Here, screening within the context of the two Directives is completely unified. Although this model may seem the least realistic in many respects it is the most likely outcome in Norway, if the structure of Figure 2 is deserted.

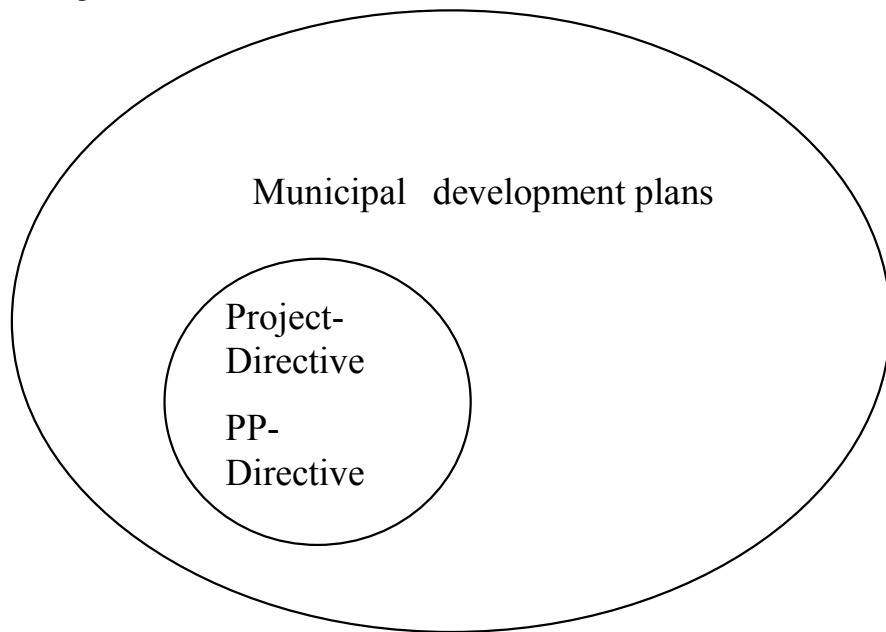
⁹ It is an important implication of the model in Figure 2, that the municipal development plan for projects covered by the EIA-Directive is considered a 'development consent', in the sense of the EIA-Directive.

Figure 4



Such integration as is shown in Figure 5 obviously has its difficul-

Figure 5



ties. As we know, the EIA-Directive involves the use of an Annex I-list of projects. An equivalent to such a list would have to be introduced for certain municipal development plans, to be in accordance with the EIA-Directive. How can this be made to comply with Article 3 (2 (a)) of the PP-Directive? This article also has a version of the 'Annex I-idea'; that some projects or PPs are often likely to have significant environmental effects, and this involves planning in certain sectors of the Annex I, as well as Annex II of the EIA-Directive. So, a combination of these two approaches seems to be the necessary first step for such a common screening-mechanism. This would represent a quite complex, let us call it, 'Annex I-approach' to screening within this integrated model. The most complicated part of this relates to the PP-directive, and the selection of plans according to Article 3 (2 (a)), that 'determine the use of small areas at the local level'. 'Minor modifications' of Article 3 (2 (a))-plans are also excluded from the 'Annex I-approach', and it becomes a challenge for the mechanism to operate these two criteria well. The guidelines seem to suggest a screening-approach to both issues, in which the possible significant environmental effects of the modifications are expected to be the determinant factor (p. 10) for SEA.

After having settled the 'Annex I-approach' a system for the screening of the remaining plans can be established. The first major challenge with this is the two different sets of criteria that the two directives have. They have certain differences, while the possible problems relating to a unification of the two will primarily come from those criteria derived from the one directive that might seem to be of little relevance for plans that bear similarities to the concept of decision making represented by the other.

To conclude, with regard to screening and municipal development plans, and if the model of Figure 2 is not kept, a screening- mechanism will have to be shaped to include, or determine the significant environmental effects of the plan that represents a development consent for the project¹⁰, and other plans that 'set the framework [...]' It remains to be seen however if this will be done in such a way that (1) incorporates screening in such a manner that accords with each of the Directives into the same mechanism, or (2) creates two separate mechanisms that either (2a) each address their own category of municipal development plans, or (2b) are operated within the same lot of municipal development plans.

¹⁰ The point here is that it is the unit 'the plan' that will be subject to EA, not only 'the project'.

Municipal master planning and county planning

The public commission proposes that, in accordance with the Directive, 'set the framework for land use' is the determinant criteria for which master plans that should undergo SEA. If 'set the framework for land use' is made operational in a way that complies with 'set the framework...' in the sense of the PP-Directive, this means that even plans of which the PP-Directive does not require SEA, will be made a subject of such. However, if 'set the framework for land use' is deemed not to cover all options with 'set the framework...' in the sense of the PP-Directive, there is a problem with compliance. As noted earlier however, we will not attempt to outline the possible implications of 'set the framework...' in the sense of the PP-Directive here.

The 'land use'-criteria of the committee has a strong reference to the land use part of the municipal master plan, which is a formal entity according to The Planning and Building Act (§ 20-4), and which carries separate rights and obligations. The rest of the municipal master plan will thereby not be subject to EA according to the PP-Directive. A land use part may also be introduced for county planning¹¹, and screening would then be as easy for that as for the municipal master plan.

The PP-Directive will be implemented for the land use parts of the municipal master plans and county plans (according to the proposals), although they are not covered by it, because there is no obligation to plan or build in accordance with these plans.

Environmental Assessment and sustainable development

EA is often seen as one of the tools available to promote sustainable development, with work being undertaken internationally and in Norway to further elaborate upon this connection. Here, brief reference will be made to the Norwegian context. The only contributions we find here are those by Tesli and Lerstang (1999) and Tesli (2002). The focus of the first is based on Sadler (1996), making the following points: (a) the precautionary principle should influence how EA is done, (b) redirect EA from focussing on minimising environmental consequences to consideration of 'the source and sink capacity of ecosystems', (c) make EA apply 'the full cost accounting procedure', (d) EA should be focused on how environmental damage could be compensated, and identify reasonable levels, and (e) integrate EA with other large scale tools for environmental management and planning (Tesli and Lerstang (1999:57) and Tesli (2002:22)).

¹¹ This has not been formulated in any documents.

Conclusions

With a strict 'land use'-related understanding of 'set the framework...' in the sense of the PP-Directive, only certain municipal development plans pursuant to The Planning and Building Act are covered by the PP-Directive in Norway¹². Nevertheless, according to the proposal by a government committee, it will also be implemented for the municipal master plan and county plans to the extent they 'set the framework for land use'.

Ironically, there is no proposal to implement the PP-Directive for municipal development plans. However, if this is attempted, we have here presented a number of models for unified coexistence between the requirements derived from each of the two directives, within the framework of municipal development plans.

SEA-requirements in The Planning and Building Act, as proposed, will make a significant contribution to the improvement of planning and the assessment of consequences, but these are only to a limited extent related to the implementation of the PP-Directive, because they are more extensive than that which is required by the Directive itself.

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¹² This conclusion is only valid for the sectors studied. It still remains to be seen if PPs outside these sectors are covered. But, this is unlikely, given the role of The Planning and Building Act in land use planning, which has been outlined earlier.

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Sustainable development and the role of SEA in municipal comprehensive planning in Sweden

Hólmfríður Bjarnadóttir and Ann Åkerskog

Introduction

Over the last 30 years the integration of environmental aspects into municipal land use planning has been an explicit political ambition in Sweden, starting with the government initiatives in SOU 1971:75. Substantial progress has been made since the early 1970s regarding the handling of environmental issues at the municipal level. However, despite both legal and political support from the national level, many environmental actors at the municipal level are still engaged in a daily struggle to keep the environment on the agenda in municipal comprehensive planning (Asplund and Hilding-Rydevik, 2001). Since 1971 political ambitions have however shifted from integrating environmental issues into other policy areas towards a focus on promoting sustainable development as an important goal in its own right in land use planning. The struggle to keep the environment on the agenda has now become part of a broader approach to supporting sustainable development, where social issues are become an essential part of the work.

Although the need for integrating impact assessment in Swedish comprehensive land use planning was recognized in connection with the preparations of the Planning and Building Act (PBA) introduced in 1987 (Asplund and Hilding-Rydevik, 1996), the legal requirements for the impact assessment of comprehensive planning in the PBA was first introduced in the PBA revisions in 1997. Between 1986 and 1997 a number of municipalities developed and implemented local voluntary SEA regulations and guidelines. These municipalities included: Huddinge, Stockholm, Nacka, Järfälla; Sollentuna, Norrköping, Karlskoga, Umeå, Väster-
vik, Landskrona, Göteborg and Sundsvall (Asplund and Hilding-Rydevik, 1996). These initiatives can best be understood to illustrate the need for, and interest in, impact assessment at the municipal level, and it has been argued¹ that the work carried out at the municipal level in Sweden with

¹ Robert Johannesson, The Swedish National Board of Housing, Building and Planning, February 2002.

regard to environmental assessment is further advanced than the requirements in the EU directive 'On the assessment of the effects of certain plans and programmes on the environment of June 27 2001', 2001/42/EC (SEA directive). This relates both to the implementation of the existing requirements for impact assessment in the Planning and Building Act, as well as the voluntary initiatives on SEA carried out by the municipalities themselves.

The existence of the legal impact assessment requirements and the practice surrounding them makes this an interesting subject to study, particularly in respect of implementation of the EU directive 2001/42/EC into Swedish legislative arrangements. The existing SEA practice in Sweden has undergone limited official as well as research evaluations. The focus of the contribution here is to shed some light on how the municipalities fulfil the SEA requirements for impact assessment included in the Planning and Building Act.

The paper is divided into two main parts. The first gives an overview of the existing framework for Strategic Environmental Assessment in Sweden, including the legal requirements in the Planning and Building Act (PBA), the Environmental Code, the Railways Act and Road Act as well as parliamentary resolutions (directives) to the on-going work towards revision of the Planning and Building Act. Furthermore, guidelines and research studies that have been carried out to assist in the application of SEA to Swedish planning practice are also outlined. A snapshot of the 'state of the art' of the implementation of SEA in Sweden, as well as current practice was established through the conduction of a series of interviews with relevant actors at the national level². Experience gained from meetings with the Swedish reference group set up to advise on 'Guidance for the implementation of the Directive in the Member States' was also important in this regard.

The second part of this contribution describes the results of a pilot study concerning the implementation of Environmental Assessment with regard to planning at the municipal level in Sweden, as a part of the requirements of the PBA on impact assessment (chapter 4, article 1). This was done through a review of six comprehensive municipal plans with regard to the application of environmental assessment, using a common checklist developed for the purpose of the study. The results of the review

² Sten Jerdenius, at the Ministry of the Environment (30th September 2002) and Ebbe Adolfsson, The Swedish Environmental Protection Agency (4th November 2002). Telephone interviews were held with Ann-Sofie Eriksson at the Swedish Association of Local Authorities, Bengt Eriksson from the County Council in Stockholm and Lars-Erik Eriksson, chairman of the Parliamentary commission.

of the different national initiatives in the field of SEA, as well as of the application of impact assessment in comprehensive municipal planning are discussed in a concluding section, where the main areas in need of further study are also highlighted.

Overview of the national framework for SEA

Introduction of Strategic Environmental Assessment

With regard to the introduction of the requirements for Strategic Environmental Assessment (SEA) into Swedish legislation, two pieces of legislation are seen as being of key importance, i.e. the Planning and Building Act and the Environmental Code.

The current *Planning and Building Act (PBA)* was introduced in 1987, replacing the Building Act of 1947. The PBA is primarily concerned with regulating the public control of building activities and physical planning at the municipal and regional levels. Measures that significantly affect land use are subjected to certain requirements and the municipalities are obliged to examine whether or not the measures satisfy the established requirements and present the requirements in the form of plans.

The *Environmental Code* was adopted in 1999. The Code serves as an umbrella for the Planning and Building Act as well as other special acts connected with the physical environment. Furthermore, it incorporates several other environmental acts. The requirements on Environmental Impact Assessment for projects are incorporated into chapter 6 of the Environmental Code. Among the acts incorporated in the Environmental Code was the Natural Resource Act (NRA), which provided fundamental rules for the management of land and water resources and the physical environment in general, in close connection with the PBA.

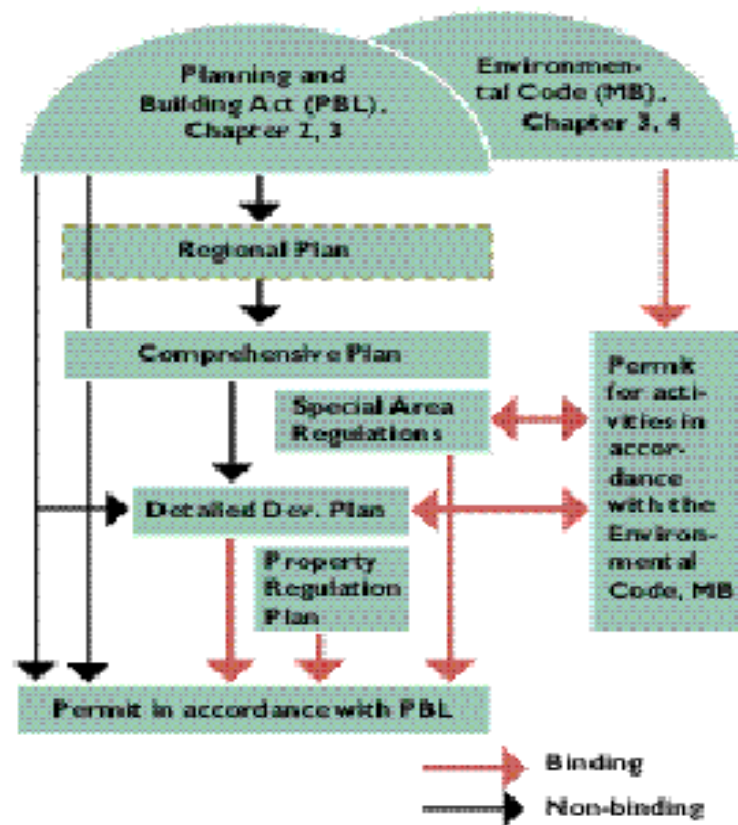


Figure 1. The relationship between the Planning and Building Act (PBA) and the Environmental Code. From the Regional Plan for the County of Stockholm, 2000. (Office of Regional Planning and Urban Transportation, 2000).

Legal requirements for Impact Assessment in Sweden

The requirements on environmental impact assessment for projects were first introduced into Swedish legislation in 1987³ and were included in the planning legislation as a requirement for the environmental impact of detailed plans in 1994 (PBA, chapter 5, article 18). In 1999, a comprehensive EIA process was introduced in the Environmental Code. Furthermore, the requirements of Impact Assessment as a part of the planning process for municipal plans were integrated into the Planning and Building Act in 1996 (chapter 4, article 1).

³ The Road Act (Väglagen, ändring 1987:745)

The impact assessment requirements for comprehensive planning stipulate that the impacts of the comprehensive plan on the environment, as well as the social and economic aspects must be stated clearly in the planning documents. In addition, it is stated that this will be an explicit part of the consultation process. These aspects also include human health and safety, cultural heritage and the management of natural resources. The fourth section of the Swedish Planning and Building Act (PBA) states that the content and the impact of the comprehensive municipal plan has to be able to be easily discerned in consultations and in the presentation of the description of the plan. Furthermore, the PBA includes provisions for environmental assessment to be carried out for detailed development plans that are considered as likely to have a substantial impact on the environment, health or management of the ground, water or other resources. The Planning and Building Act also entails regulations regarding consultation procedures and the presentation of plans. These regulations correspond to the regulations included in the Environmental Code regarding consultation as a part of the EIA process.

The EIA requirements for certain detailed local plans can be viewed as a pre-implementation of the main element in Directive 2001/42/EC. As a matter of fact these requirements to some extent guided some of the Swedish positions in the negotiations and resulted in Paragraph 11.2 of the Directive.

Requirements for assessing the impacts on the natural and cultural components of the environment, health as well as management of resources can also be found in the *Swedish Road Act*, although these are not considered to fulfil the EU requirements of Strategic Environmental Assessment.

The requirement to carry out *environmental assessment for policies and national programmes* does not however exist. However, the importance of conducting environmental assessment for policies was stressed in the Swedish national strategy for sustainable development, prepared for the Rio + 10 meeting in Johannesburg. One example of where environmental assessment has been brought to a higher political level is the environmental assessments that the 'Kommunikationskommittén' carried out as part of its evaluation 'Ny kurs i trafikpolitiken' (SOU 1997:35).

Parallel to the growing interest in SEA, *national environmental quality objectives* have been adopted. The parliament adopted 15 environmental quality objectives in 1999 (governmental bill 2000/01:130). The bill itself focuses on the ecological dimension of sustainable development. The objectives are formulated with regard to nature's capacity to absorb environmental impacts and as such, the bill defines the desirable

future state of the environment. The focus here is mainly on aspects such as human health, biological diversity, cultural environment and nature. The national environmental quality objectives have been adopted at the regional and local levels, with the presentation of regional and local environmental quality objectives. According to SAMS (2000) the national environmental quality objectives provide an important framework for the implementation of SEA.

THE ELEMENTARY PARTICLES OF THE PLANNING SYSTEM

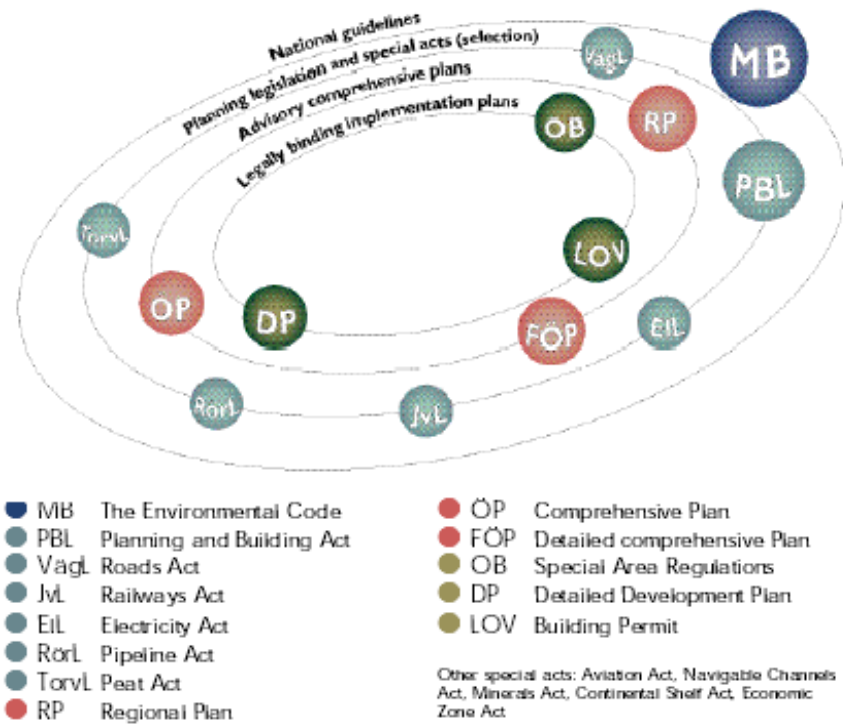


Figure 2. The 'elementary particles' of the Swedish spatial planning system. From the Regional plan for the County of Stockholm, 2000 (Office of Regional Planning and Urban Transportation, 2000).

On-going activities concerning the implementation of the SEA directive

It is still not clear which plans and programmes will be covered by the implementation of the EU directive 2001/42/EC in Sweden. Below is an overview of the main types of plans that are considered likely to be covered by the introduction of the directive. A more detailed discussion of the plans likely to be covered is provided in the article by Peggy Lerman in this publication.

Table 1. Overview of the main types of plans likely to be covered by the SEA directive

Legal frame-work	Plans	
Planning and Building Act	Land Use Plans	– Regional Plan - neither mandatory nor binding – Municipal Comprehensive Plan - mandatory but not binding – Area regulations – not mandatory but binding – Detailed development plan - mandatory and binding
Ordinance	Transport Plans	– National Road Plan – National Plan for main railways – Country plans for regional transport infrastructure
Acts	Energy Plans Waste Management Plans	
Other initiatives, e.g. the Water Framework Directive	Future Plans and programmes	

The on-going work towards the implementation of the directive includes the activities of two working groups; a group appointed to oversee the Swedish work on guidance for the SEA directive (reference group) and the group working on the on-going revision of the Planning and Building Act, appointed by a parliamentary committee. In the legal implementation process, relevant professional categories will be repre-

sented. This work will be carried out by legal experts with advice from politicians and experts.

A *Parliamentary Committee* has been appointed by the Swedish Government to find a way to integrate the SEA-Directive into the Swedish legal system and to revise the Planning and Building Act. This Committee consists of the co-ordinator and representatives from the political parties in the Swedish government. Work towards the revision of the Planning and Building Act was formally launched in September 2002. The main objective of the committee's work is to examine the revision of the Planning and Building Act with regard to its co-ordination with the Environmental Code. The proposal of the Committee shall provide for the promotion of a sustainable development, where the ecological dimension of sustainable development is manifested in the environmental quality standards. The committee should also address questions including: Regional collaboration; comprehensive planning; local plans; quality and sustainability in construction and management and sanctions

When it comes to the implementation of the EU Directive 2001/42/EC, the assessment should concern all the measures needed for implementation into Swedish legislation. This work shall be concluded by the 30th of June 2003. The rest of the committee's work shall be completed by the 31st of December 2004.

An important contribution to the work on the implementation of the SEA directive is the *guidance for the implementation of the SEA directive*, currently in preparation by the European Commission in collaboration with the Member States. Sweden was responsible for guidance on the directive's requirements for environmental reporting and alternatives. A *reference group for SEA implementation* was then jointly assembled by the Ministry of Environment and the Swedish Environmental Protection Agency to assist in the task of compiling the guidance dossier. The reference group consists of representatives from different Swedish State Authorities, and research institutions⁴. The reference group commented upon and discussed the proposals produced in the drafting group with regard to the clarity of, and potential obstacles to implementation of the Directive in the different planning systems.

⁴ The Swedish Environment Protection Agency, The National Board of Cultural Heritage, The National Board of Housing, Building and Planning, The National Board of Health and Welfare, The National Train Administration, The National Road Administration, The National Institute of Public Health, The Swedish Association of Local Authorities, The County Council in Stockholm, Nordregio, The Swedish EIA-Centre at the Swedish University of Agricultural Sciences and Blekinge Institute of Technology.

On the basis of the information assembled in interviews with the parliamentary committee, representatives from the Ministry of the Environment and the Swedish Environmental Protection Agency also attended the meeting in the reference group; the following obscurities can be identified regarding the introduction of the SEA requirements in the Swedish legislation. Firstly, the legal acts that will accommodate the requirements of the SEA directive are uncertain, i.e. will the SEA requirement be included in the Planning and Building Act or the Environmental Code? Although the implementation of the directive is included in the parliamentary committee's work on the revision of the Planning and building act, the role of the SEA directive in the future development of the planning system is not clear, nor is the question of how the SEA directive will contribute towards the goals of sustainable development. The implementation of the directive will most likely be adjusted to the existing legal system (i.e. either the Environmental Code or the Planning and Building Act). It is unlikely to go further with regard to the legal requirements of the application of SEA in planning practice or more detailed guidelines for implementation than the minimum guidance provided in the SEA directive.

Activities by state authorities

The *Swedish Environmental Protection Agency (Naturvårdsverket)* has prepared and published guidance on the application of SEA (see table 2); general guidelines on how SEA can be used in different planning contexts (Naturvårdsverket, 2000), including municipal planning and a specific guidelines on environmental assessment of the planning of transport systems (Naturvårdsverket, 2001), in addition to guidelines on the subject of environmental assessment of structural funds (Naturvårdsverket, 1999). Furthermore, studies have been conducted on how SEA can be applied in connection to the structural funds and environmental considerations in regional development (Naturvårdsverket, 1999 and 2002)⁵. The guidance documents give an overview of the background to, as well as a methodology for, SEA, including the main 'moments' in the process, i.e. screening, scoping, consultation, alternatives, analyses, assessment, uncertainties, reporting and follow-up.

⁵ Naturvårdsverket, 2002. Bredda perspektiven – miljöintegration i tillväxtarbetet. Rapport 5163.

Table 2. Guidance documents published by the Swedish Environmental Protection Agency

<i>Title</i>	<i>Main focus</i>
Strategiska miljöbedömningar – ett användbart instrument i miljöarbetet, 2000. Rapport 5109.	Gives an overview of the application of Environmental Assessment as an instrument in the environmental work. Includes examples of the application of strategic environmental assessment in the Swedish context given, including the applications as part of national transport policy (Kom-Kom), transportation planning, traffic planning at the regional level, environmental assessment of regional structural funds, regional plan for Stockholm region as well at the municipal level.
Miljöbedömningsguiden – Vägledning för miljöbedömning vid planering av transportsystem. Naturvårdsverket, 2001.	Guidelines specifically targeted at the application of SEA in relation to planning of transport systems ⁶ .
Naturgasutbyggnad i Sverige - metod för strategisk miljöbedömning inom energisektorn. Naturvårdsverket, 2002. Rapport 5161.	Presents a method developed for SEA within the energy sector, using the development of natural gas as an energy source.
Miljöprofil på EU:s Struktur-fondsprogram, 1999. Report 4973.	The guidelines identify the potential of SEA as a tool that can provide the programmes with an environmental profile, including a description of the main SEA steps to be integrated in the overall programming process. Special emphasis is placed upon the use of environmental objectives to promote sustainable development.
Breda perspektiven – miljöintegration i tillväxtarbetet. Naturvårdsverket, 2002. Rapport 5163.	Illustrates the results from a pilot project that was carried out in three pilot counties and suggests strategies and methods for increasing environmental integration in future regional programmes for growth.

⁶ Miljöbedömningsguiden – Vägledning för miljöbedömning vid planering av transportsystem.

The *National Board of Housing, Building and Planning* has participated in activities in the SAMS projects and has had studies conducted, looking in particular at the early experiences of application of SEA in land use planning. Other relevant publications include an analysis of the social and economic consequences in planning (Boverket, 2000).

Several activities have taken place within, or in co-operation with, different sectoral authorities, with regard to the introduction of environmental assessment requirements into existing practices, or to specifically implementing the requirements laid out in the directive. This has been in the form of the preparation of guidelines and evaluations.

The *National Heritage Board* has published several documents on the cultural heritage in Environmental Impact Assessment with reference to environmental assessment at the strategic level (e.g. Riksantikvarieämbetet, 1996⁷ and 1997⁸) and has also held a seminar on SEA and the issue of cultural heritage in 2002.

The *Swedish Road Administration* has carried out development work on the application of SEA in the transport sector. Reports on SEA in the transport sector include 'Ny kurs i trafikpolitiken' (SOU 1997:35), 'Storstaden och dess transporter' (SIKA; Statens institut för kommunikationsanalys, underlagsrapport till SAMPLAN, Stockholm, November 1999), 'Transportkorridor Göteborg-Jönköping, metodstudie för SMB' (Vägverket, 1998).

Requirements for SEA in the *National and Regional Traffic plans* have been present since 1996 (in accordance with the Infrastructure Government Bill of 1996/97:53). According to the bill, the County Councils shall produce long-term infrastructure investments plans for which a Strategic Environmental Assessment shall be carried out. A study on the *Strategic analysis of measures within the transport sector within the planning period 2002 – 2011* and the way that SEA could be applied within the strategic planning sector was carried out by SIKA in 1999⁹. The study focused specifically on the application of SEA to the strategic transport sector and included specific suggestions regarding the processes and usage of checklists for the environmental assessment. Among the issues that were identified as being in need of clarification in the future development of SEA were:

⁷ Kulturmiljöbeskrivningar i planeringsunderlag – Några exempel.

⁸ Kulturvärden och MKB. Målsättning och vägledning för Miljökonsekvensbeskrivningar.

⁹ Strategisk analys. Slutrapportering av regeringsuppdrag om inriktningen av infrastrukturplaneringen för perioden 2002- 2011. SAMPLAN Rapport 1999:2.

- More relevant experience of the methodology.
- The scope of environmental issues needed to be clarified.
- Need for increased integration in the process, but SEA's roll in the process and its expectations must be clarified.
- The SEA should be applied at earlier stages in the process.

SAMS

A development project that holds specific relevance for the environmental assessment of municipal plans is: '*Environmental objectives and indicators in spatial planning and strategic environmental assessment*', commonly known as *SAMS*. The project ran over a three-year period and was concluded in September 2000. It was led by the National Board of Housing, Building and Planning (Boverket) and the Swedish Environmental Protection Agency (Naturvårdsverket), along with several municipalities and regional authorities, and was co-financed by the EU environmental fund LIFE and the Swedish International development Cooperation Agency (SIDA).

The project encompasses a number of different aspects of environmental integration, including three thematic studies. The key issues addressed in the project were:

- To integrate environmental issues into comprehensive planning.
- To formulate the role of comprehensive planning in the work towards sustainable society development, particularly from an environmental viewpoint.
- To enhance collaboration in the planning process, partly among the different areas of professional competence within comprehensive planning and environmental protection and partly among experts, decision-makers and the general public.

The section that focused on SEA looked in particular at the experience of applying SEA in physical planning from 1996 onwards. Among the reports that have been published by the National Board of Housing, Building and Planning and the Swedish Environmental Protection Agency as a part of the *SAMS* projects regarding SEA are those looking at the application of *Environmental objectives and indicators in spatial planning and SEA*¹⁰, experiences of *SEA and comprehensive physical planning*¹¹

¹⁰ För en bärkraftig samhällsutveckling – miljömål och indikatorer i fysisk planering. 1997. Boverket och Naturvårdsverket (SAMS). Indikatorer i fysisk planering. En kunskapsöversikt. 1999. Boverket och Naturvårdsverket (SAMS).

¹¹ SMB och översiktlig fysisk planering. 2000.

and a discussion report on *ideas on SEA*¹² including papers by Lars Emelin, Anders Hedlund and Erik Plathe. The SAMS report *SEA and comprehensive physical planning* explores how environmental objectives and indicators, along with other tools, can be used in the description of the impacts of strategic physical planning. Emphasis here is placed on the interaction between the planning process and strategic environmental assessment, SEA. The study examines both the theories and methods of SEA as well as giving concrete examples of integrating or separating environmental assessments in the planning process. The study also presents several SEA case studies of application of SEA in the municipalities¹³ and at regional level in Stockholm County as a part of an on-going plan preparation. According to the study, the methodology that has developed furthest is found in Stockholm's regional plan. Examples are given of the application of SEA in programmes, prepared and adopted at the national level. The study highlights the relevance of national infrastructure plans for the physical planning. The overall conclusions from the case studies in the SAMS project is that most of the SEA processes were still on-going in the municipalities and therefore that it was still too early to draw any general conclusions. However, the importance of developing further the use of indicators was among the main conclusions of the case studies, as well as the realisation that there was a need to evaluate their application in the environmental assessment work.

Other research studies

Among the research studies that have been carried out on the topic of the application of SEA in the field of comprehensive planning are research studies that have examined the application of SEA in the municipal planning processes (Asplund and Hilding-Rydevik, 1996) as well as a review of the application of SEA in the comprehensive municipal planning of selected municipalities in Sweden, carried out by Aili Käärrik and Kristina Svensson that forms a part of a Nordic study on the application of SEA in a Nordic project on strategic environmental assessment for plans and programmes (TemaNord, 1999). Furthermore, a review package on assessing the quality of the Strategic Environmental Assessment of Land use plans was developed and presented as a part of a Master's disserta-

¹² Idédiskussion kring SMB i planering. 2000. Boverket och Naturvårdsverket (SAMS).

¹³ Case studies were carried out in the municipalities of Burlöv, Helsingborg, Trollhättan, Stockholm, Borlänge, Falun and Storuman. Furthermore the Office of Regional Planning and Urban Transportation in Stockholm with the support of the respective county administrative boards in the countries of Skåne, Västra Göteland, Stockholm, Dalarna and Västerbotten.

tion¹⁴ as well as a theoretical discussion and proposals for an SEA process based on planning in Stockholm municipality¹⁵.

The studies mentioned above have largely focused on the development of a methodology regarding how to apply environmental assessment to existing processes. However, relatively few evaluations have been carried out on SEA application in municipal planning, or the implementation of the requirements of impact assessment included in the PBA.

The starting point for the SAMS study and its main objective is to develop methods for handling environmental goals in comprehensive planning with the main emphasis on municipal comprehensive planning. This includes how environmental objectives and indicators along with other tools can be used as a part of the assessment of environmental impacts in strategic physical planning. No single methodology is presented or recommended as a part of the study, though certain steps are presented, highlighting the importance of selecting an approach, process and involvement. Thus, SEA is a part of the SAMS main area of interest, though it is however to a large extent based upon the way that the SEA methodology can be applied to the existing tools for integrating environmental considerations in the planning process.

The Application of Impact Assessment to comprehensive municipal planning in Sweden

The discussion in Sweden to develop a process for strategic environmental assessment in land use planning dates as far back as the early 1980s, as stated in the introduction. A growing interest in developing and applying the SEA methodology emerged in Sweden during the late 1990s, especially in the application in the transport and the physical planning sectors (Käärrik and Svensson, 1999; Hildén et al 1998; Swedish Government Official Report, 1997; SIKA 1999, Vägverket, 1998). This interest can be seen as a result of international progress in the area of SEA, in addition to a national political urge to strive for sustainability and the need for environmental considerations at all levels of planning (Balfors and Schmidtbauer, 2002). Furthermore, the SAMS study on the inte-

¹⁴ Bonde, Julia. 1998. Quality of Strategic Environmental Assessment of Land-Use Plans: A Review Package for the UK and Sweden. University of Manchester, Masters Dissertation.

¹⁵ Eggimann, B. 2000. Fysisk planering med strategisk miljöbedömning (SMB) för hållbarhet. En teoretisk diskussion och förslag till SMB-process med Stockholms stad som modell. Boverket och Naturvårdsverket (SAMS).

gration and application of environmental objectives in planning (Boverket, Naturvårdsverket, 2000) has addressed the application of Strategic Environmental Assessment in municipal and regional planning, highlighted the experiences and recommended a methodology for the application of SEA.

Background

‘An essential goal in the Swedish planning system is independent municipalities with responsibilities to pay attention to national objectives’(EC 2000:38).

When discussing Strategic Environmental Assessment for municipal plans it is important to understand the preconditions for land use planning and what role the municipal plans hold in the national planning system. In the context of land use planning in Sweden, planning or spatial development policy systems is characterised by a high degree of sector orientation (Böhme, 2002).

There is no overall planning at the national level although there do exist regional and environmental policies, which are developing toward a more comprehensive view. In addition there are sectoral development perspectives that can have a substantial impact on planning at the lower administrative levels. The 21 counties do not have a statutory role with regard to physical planning, and there is no general mandatory regional land use planning in Sweden although the government may appoint a regional planning body responsible for regional planning. Thus, the municipal level is crucial as it is the only statutory planning level, while the municipalities exercise a so-called ‘planning monopoly’ with regard to physical planning, which implies that the municipality has primary responsibility for planning the use of land and water within a legal framework set and supervised by the national government. However, only the detailed development plans (*detaljplaner*) are legally binding, whereas the municipal comprehensive plans are merely for guidance purposes as regards development.

Through the PBA amendments in 1996, both planning processes and the requirements on the contents of the comprehensive municipal plans have been strengthened, including a significant strengthening of the inclusion of the environmental aspects and the provision for public participation in the planning process (Käärrik and Svensson, 1999). Apart from the requirements presented in the PBA, other environmental initiatives have been initiated at the national, regional and municipal levels. These include the development of environmental goals and indicators as well as increased public participation, e.g. through work on Local Agenda 21.

Review

The following section looks at the application of the requirement for impact assessment of municipal plans included in the Planning and Building Act.

The reasons for focusing on the land-use planning sector were principally based upon the following factors:

- Considerable experience has been assembled in Sweden with regard to the application of environmental assessment in land use planning.
- Many of these experiences have been documented (e.g. Käärik and Svensson, 1999 and SAMS, 2000), or have been presented in other ways. However, the actual outcomes of the implementation of requirements of impact assessment in the PBA have not been systematically assessed, nor compared to the requirements of the SEA directive.
- The land-use planning sector is one of the areas that will definitely be included in the future application of the SEA-directive in Sweden.
- Municipal land use planning constitutes the only formal comprehensive and cross-sectoral land use planning level in Sweden.

The overall objectives are to illustrate the outcome of the application of the PBA requirements on Impact Assessment in municipal comprehensive planning in Sweden. In order to fulfil those objectives, six comprehensive municipal plans were studied and reviewed, using a common checklist. The checklist addressed the main steps identified in the SEA directive, with a focus on how the assessment is reflected in the planning documents and what it means 'in practice' to assess the environmental impacts of a municipal plan. This includes the question of what issues were addressed in the assessment, including the aspects of the environment; the methods used; who participates in the process and how the results of the assessment were reflected in the final planning document. Furthermore, procedural aspects, including the extent to which the impact assessment was integrated into the planning process were addressed. Other issues that are regarded as being of relevance in respect of the application of SEA at the municipal level in Sweden, e.g. the way that sustainability and environmental indicators are linked to SEA work are also highlighted and discussed.

The municipalities included in the review were the following: Karlstad, Kungälv, Malmö, Sigtuna, Staffanstorps and Uppsala. The mu-

municipalities selected for the study adopted comprehensive municipal plans during the 5-yr period; 1997-2002. The planning processes were completed after the PBA amendments in 1996 that introduced the requirement for impact assessment in the comprehensive plans.

The municipalities vary in size and regional character, which is partly reflected in the different issues addressed in the municipal plans. The criteria for the choice of plans were to study municipalities that were known to have applied impact assessment as a part of the planning process. It was not a selection criterion to identify 'best practice' in that respect, but instead to give a 'snapshot' of current practice in Sweden. The municipalities included and analysed in the SAMS study on SEA and comprehensive physical planning (Boverket, Naturvårdsverket, 2000) were purposely omitted.

Table 3. Plans included in the review

<i>Municipality</i>	<i>Title</i>	<i>Status</i>	<i>Year</i>
Karlstad	Municipal plan of Karlstad 1997	Adopted	1997
Kungälv	Municipal plan 2000	Adopted	2000
Malmö	Municipal plan of Malmö	Adopted	2001
Sigtuna	Municipal plan 2000, Sigstuna	Adopted	2002
Staffanstorps	Municipal plan of Staffanstorps	Adopted	2002
Uppsala	Municipal plan of Uppsala city	Adopted	2002

The main results of the review

Below is a summary of the main results of the checklist review. The complete results of the review of the municipal plans are included in appendix 1 of the study.

Description of the plan, the affected environment and the baseline conditions

The review concerned both the contents of the plan, the planning context for the plan preparation, strategic components and its connection to other environmental protection measures. Furthermore, the aspects of the environment highlighted in the plan were given special attention. The contents of the plan and its scope is considered to be of particular relevance to the outcome of the Strategic Environmental Assessment, as the assessment is limited to the policies and the proposals presented in the municipal plans.

Contents of the plan

The Planning and Building Act does not specify in detail what the municipal plan shall contain. However, according to chapter 4, article 1 in the Planning and Building Act 1987:10, the plans shall indicate the:

- Main points concerning the intended land use of land and water areas.
- The municipality's views concerning how the built environment is to be development and preserved.
- How the municipality intends to take into account current national interests.

Furthermore, it should be possible to read the plan's contents/meaning and impacts without problems (Lag 1998:839).¹⁶

The issues to be addressed in the municipal plans can thus be expected to vary considerably between municipalities, including the strategic element of the plan, i.e. to what extent the plan presents the municipal council's future development, and to what extent it largely provides a framework for land use in the municipality. The context for development in the municipality, i.e. the regional context and its place in the planning hierarchy can also be an influential factor. However, in the 1996 amendment of the Planning and Building Act, the requirement regarding the contents of the comprehensive plans was strengthened and new requirements on the environmental aspects in the planning were introduced. This includes requirements to include aspects of sustainability in the plans, as well as the requirement that the impacts or the consequences of the com-

¹⁶ Av planen skall framgå: 1. grunddragen i fråga om den avsedda användningen av mark- och vattenområden, 2. kommunens syn på hur den byggda miljön skall utvecklas och bevaras, 3. hur kommunen avser att tillgodose de redovisade riksintressena och iaktta gällande miljökvalitetsnormer. Översiktsplanens innebörd och konsekvenser skall kunna utläsas utan svårighet. Lag (1998:839).

prehensive plan must be stated clearly in the planning documents and must be available throughout the public participation process.

The review of the municipal plans illustrated clear differences in the type and 'nature' of these plans. The size of the municipalities, the number of inhabitants and their location give different preconditions that are reflected in the plans. An example of this is the development pressure or opportunities that go hand-in-hand with Sigtuna's and Uppsala's vicinity to the Stockholm region. Similarly, Staffanstorp faces development challenges with regard to housing, transport etc, that largely reflect the municipality's location in the economically expansive Öresund's region and in particular its proximity to Helsingborg and Malmö, than the actual size of the municipality's or number of its inhabitants. Similarly, aspects addressed in Malmö's municipal plan reflect the municipality's location in the Öresund's region, and Kungälv's location in the Gothenburg region. Karlstad's regional context was not as clearly reflected in the municipal plan as the others, and referred to a greater extent to planning issues within the municipality.

The affected environment and baseline conditions

All of the plans identify the need to look at social and economic aspects in relation to the more 'traditional' understanding of environmental factors that are based on ecological aspects. However, there are local variations, where emphasis is laid on certain environmental issues that shall be mentioned and safeguarded, one example of this being the emphasis placed on the urban environment in Uppsala's municipal plan, cultural environment and agricultural characteristics of the rural environment in Sigtuna. In Kungälv the 'Natura 2000' areas are described and the effects on those commented on in particular.

Integration of the Impact Assessment in the overall plan structure and transparency

The requirements on Environmental Impact Assessment in the Environmental Code include a separate EIA process with a legally based procedure that guarantees transparency and quality in the process. Conversely, the requirements on Impact Assessment included in the PBA do not regulate a special process for the impact assessment in detailed planning or analyses of effects of the procedure, but this is to be considered as a part of the consultation and presentation within the plan making process. This can be linked to a wider discussion on the actual meanings of SEA *per se*, and to what degree it is the same or differs from traditional planning practice. The phrase with which this discussion has been tagged is 'Integrate with integrity' and this means that there shall be an interaction between planning and SEA, not that SEA shall be the same as planning or shall

develop as an alternative to planning. The mix-up in the intentions of the two processes and the eventual outcome in particular is relevant within the field of municipal planning. Hedlund (2000) emphasises the importance of distinguishing between the role of SEA as a basis for decision-making and it being a decision making document. It has been shown that the integration of SEA within the planning process enhances the influence of the outcome of the assessment on the final results (Therivel and Minas 2002). Moreover, this is particularly so where integration occurs in the early phases of the planning process (Asplund and Hilding-Rydevik 1996b). Whether the impact assessment is integrated into the municipal plans or not, is therefore interesting to know, and indeed this was one of the questions included in the checklist, i.e. whether the impact assessment is integrated or forms a separated document or chapter in the plan?

Transparency in respect of the results of the impact assessment and the effects on the final planning proposal is another aspect of integration in this regard, and of the way that environmental conflicts are identified or made visible. There are many reasons why transparency in the planning process is considered to be of importance. One of them is to highlight potential conflicts, where they are and how these interests are dealt with in the plan. If the plan as well as the process is transparent, the decisions will be readily available to the general public, and the legitimacy of the plan will be improved (Emmelin, 2000).

The study shows that the results of the impact assessment are most commonly presented in separate chapters in the planning document. These chapters have illustrated the main impacts of the plan, but have however only to a limited extent highlighted the conflicts existing within the plan. One exception to this being the impact assessment carried out in Kungälv, where the impact assessment is an integrated part of the plan and the planning process. Furthermore, the role of the assessment in the planning process is well documented in Kungälv, e.g. in special reports compiled to describe the process. Despite the integration of the assessment in the overall plan, the impacts of the individual planning goals are illustrated in the plan and show conflicts between the development of roads, small towns and so on, and the social, economic and physical environmental. As a part of this, the conflicts between the different planning issues and objectives are highlighted, as are the potential impacts of different planning proposals.

Table 4. Overview of environmental aspects identified in the assessment

	<i>Environmental aspects identified in the assessment of the municipal plans</i>
Karlstad	Conditions of the natural environment, landscape, townscape, land use, cultural environment, recreation and outdoor activities, environmental conditions, technical and structural conditions, risk and ecosystem considerations.
Sigtuna	Emphasis on protection the agricultural character of the municipality's environment and the cultural environment.
Kungälv	Good quality living environment, built environment, preservation of natural environment, culture, access, communications, technical support, robustness, safety and risk considerations.
Malmö	Different aspects of the environment, depending on the level. On the regional level environment identified economic, traffic, social and environmental aspects. At the municipal level, the impacts are firstly described in light of the overall development-strategy and then in terms of the impacts for the various sectors. The sector aspects have been assessed for economic, social, traffic and environmental aspects.
Uppsala	Traffic-related environmental issues, land-use and effects on urban quality
Staffanstorps	No specific aspects of the environment were highlighted in the plan. However, it was emphasised that the national environmental goals are a basis for the environmental considerations on which the plan is based.

Overall, transparency with regard to the methods used in the impact assessment, what the outcomes of the assessment were and how they affected the planning proposals, is lacking in the plans reviewed. An example of this is the impact assessment carried out as a part of the planning process in Uppsala, where it is not clear when in the process the impact assessment took place and there is no obvious connection to the description of the main impacts and the planning proposal. In Karlstad, the connection between the impact assessment and the planning proposals is illustrated in a special column as part of an assessment table (Figure 4).

However, there is no mention of the impact assessment in other parts of the plan, or how the assessment has affected the final proposal. In other municipalities (Malmö, Sigtuna and Staffanstorps), the results of the assessment are not referred to in other parts of the planning proposal. However, the need to carry out complementary assessment at later stages, e.g. environmental impact assessment as a part of a transport proposal or a detailed plan, is highlighted in several of the plans.

Reporting

Identification and evaluation of key impacts – Aspects included in the impact assessment chapter

The overall findings from the review of the aspects addressed in the different municipalities' impact assessment are that most of the municipalities understand the requirements in the PBA for impact assessment not as an exclusively environmental assessment, but emphasise the connection between environmental, social and economic factors. This is reflected in the elements highlighted in the positive and negative effects of the plans, (e.g. the assessment table in Karlstad's municipal plan) which often contain a combination of social and economic considerations in the coverage of environmental aspects. In Sigtuna's municipal plan it is a declared aim to give the three components of sustainable development the same weight, i.e. the *ecological factors* (environmental factors in a broad understanding), *economic factors* (including societal and economic development in the municipality), as well as the *social factors* (encompasses time usage, security, accessibility to services, and possibilities for interaction and integration).

None of the plans present indicators that are used in assessing the impacts resulting from the planning proposals, while the results of the assessment are reported in broad terms (see figure 3 and figure 4). The aspects of the environment that were highlighted as particularly important in the plan (i.e. the affected environment and baseline condition) were generally not reflected in the assessment chapter.

Communication of the results

In the SEA-directive, much emphasis is placed on the reporting of motives and decisions throughout the process. In our study, we have found few examples of easy to grasp reports of the analyses and assessments. Most of the plans show more of a summary of the main impacts of the plan presented in the form of a discussion, such as in Sigtuna and Staffanstorps' municipal plans. In Malmö and Uppsala, the results are reported in a separate chapter, listing the main impacts of the planning proposals. In Uppsala this has been made through a comparison of two alter-

natives; the ‘dense city’ and the ‘sprawled city’. In Malmö the stated objectives of the impact assessment are ‘...in short, summarize the plan, to focus on important issues and to show possible impacts’. In Kungälv a matrix shows impacts of the four scenarios in relation to Agenda 21, health, and economy in the long and short-term perspectives and robustness (see figure 3).

Konsekvenser Scenarier (bebyggelsestruktur)	Kretslopp Agenda 21	Folkhälsa	Kom. ekonomi lång sikt kort sikt	Robusthet Sårbarhet
Kust och glesbygd				
Serviceorter				
Serviceorter och stråk				
Lokalsamhällen/byar				

Figure 3. The aspects included in the impact assessment in Kungälv. (Kungälv Kommunplan 2000)

Propo- sals	Loca- tion	Type of devel- opment	0-alter- native	Deve- lopment re- quired	Sustain- able de- velopment	Positive effects	Nega- tive effects	Evalu- ation
No. 1 No. 2 - - No. 43								

Figure 4: Example from Karlstad on the assessment of development proposals.

Procedural aspects

The study checklist addressed aspects of the impact assessment process, mainly with regard to the reference to the working procedure; who carried out the analysis and what methods were used? The methods used to assess the impacts of the plans are not easily discernible from just reading the plans. The procedural aspects of the impact assessment, i.e. who carries out the analysis and the methods used, are described to a minimal

degree. With regard to the responsibility for carrying out the assessment, it can be assumed that staff at the various planning departments was responsible for carrying out the assessments, with the exception of Uppsala, where it is stated that a consultancy firm carried out the impact assessment. However, the planning process itself, as well as the impact assessments in the PBA are briefly described in the plans. An example of this being Malmö's municipal plan where the planning process is described, and it is noted that broad discussion on 18 issues was held among NGOs, in seminars, through exhibitions and articles in the community-leaflet.

Scenarios and alternatives

Each municipality bases its work on the planning process to some extent on scenario techniques utilising the presentation of different alternatives.

In Uppsala's municipal plan, two different scenarios or planning alternatives for the future development of the municipality are presented, i.e. the 'dense city' and the 'sprawled city'. In Sigtuna, an overall vision of municipal future development is presented, upon which the planning proposals are based and only one alternative is presented. The proposal presented in Staffanstorp's municipal plan is based upon one future vision, consisting of six different elements that form the future development of the municipality, i.e. good living environment, intimate and small-scale development, good quality architecture and environment, cultural landscape as a resource, green structure and recreational and environmentally friendly communications. In Malmö's plan two different alternatives are assessed, i.e. today's situation and the fully developed municipality according to the proposals presented in the plan. The community specifically says in the plan that a zero-alternative cannot be regarded as an alternative since that would, among other things, be unrealistic and mean that the municipality would have to break the law.

In Kungälv and Karlstad the connection between the scenarios and the impact assessment process is illustrated. The planning process in Kungälv is based upon work with scenarios, with the aim being to reach consensus on the future development of Kungälv. Four possible scenarios for building development were made by the working group for the municipal plan. The first being to build in 'coast and sparsely populated areas', the second called 'service population centres', the third 'service populated centres and thoroughfares' and the fourth 'local communities and villages'. The impacts of these four scenarios were then assessed via four main questions relating to Agenda 21, public health, infrastructure on short and long view and robustness/vulnerability. These different scenarios were then handed over to the politicians for decision, based on the goals for Kungälv in the future. Kungälv municipality hoped to gain a

broadly based approval for the plan and invited the public into the process on at least four occasions; at the beginning of the process, in the ordinary consultation period, during the exhibition of the plan and in work with 'citizen groups' in certain parts of the community. The work with impact assessment was done partly in parallel to the planning process, which made it possible to adjust some of the proposals during the process and the impacts are assessed according to the four different alternatives.

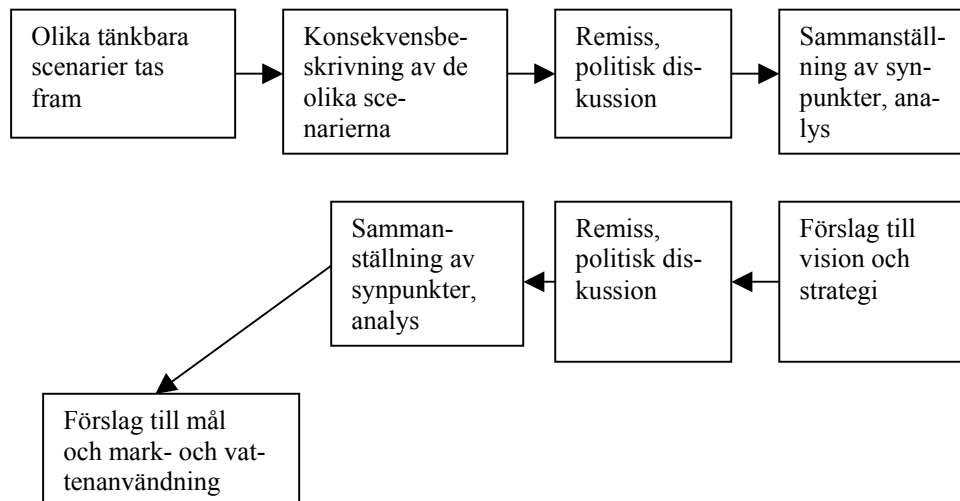


Figure 5. The steps of the planning process in Kungälv

In Karlstad coverage of the environmental effects is structured in the same way as the plan in general. It does not assess the effects of the overall proposals for developing the municipality as a whole, but instead is based on individual proposals within the following development areas; housing, economic activities, traffic and other issues, including the establishment of recreational areas, waste disposal stations and a cemetery. These developments are proposed within a particular location that is specified in the assessment. There is direct reference to the overall visions and goals for future development of Karlstad, which are presented in a compatibility matrix, where the compatibility of the developments proposed and the overall goals of the plan are compared and weighed. These include the following goals: proximity to services, alternative energy development, location in built-up areas, location in rural areas, public transport, proximity to nature and services, connection to other dwellings, connection to workplaces, reduction of the need to travel, use of

existing infrastructure services etc. A 'zero alternative' is presented for each of the planning proposals included in the assessment.

Bridging the discussion on sustainable development and sustainability indicators in the introduction of SEA

All of the municipalities address sustainable development explicitly in their municipal plans. The goal of sustainable development of the municipalities is an overall policy objective in Uppsala, Karlstad and Staffanstorps and a part of the visions for development in Malmö. Several of the municipalities give a definition of their understanding of sustainable development in their plans, i.e. that it must be based upon ecological, social and economic principles and emphasise the linkages between economic development and environmental considerations in the planning process. Concrete suggestions for sustainable land use in the municipalities include increased density in the urban structure, the reduced need to travel, reduced energy needs and the development of alternative energy etc. In several of the municipalities, the sustainable development initiatives are linked to existing work within local Agenda 21 and environmental quality norms. However, there is limited reference to the sustainability discussion in the assessment chapters. An exception to this being the discussion on conflicting land uses in Kungälv's and in Karlstad's municipal plans, where the environmental assessment of different alternatives and EIA of detailed plans are seen as a factor in considerations of sustainability in planning.

National environmental goals are highlighted in several of the plans where it is clearly stated that the municipalities see these as a basis for the environmental considerations in the plan (e.g. Staffanstorps). Furthermore, the regional environmental goals are referred to as a framework for the municipal planning process and the impact assessment thereof. In Malmö's municipal plan, the environmental goals are used as a starting point for each of the three sections of the impact assessment chapter, based upon the national, regional and local environmental goals.

Several of the municipalities have established their own environmental goals. An example of this being Karlstad's municipal plan (adopted before the current national environmental goals had been adopted), that refers to the municipality's own environmental goals included in the municipality's environmental controls programme. Sigtuna municipality has also adopted environmental goals for the municipality that were prepared within the framework of the national environmental goals and regional environmental goals prepared for the Stockholm region. In Staffanstorps, the national environmental goals were used as a framework, to the extent

that they were considered to be of relevance, i.e. urban development, traffic, energy, industry, commerce, recreation, green structures and water.

Concluding discussion

The following discussion and conclusions are based upon the review of the current practice of SEA application in Sweden. The review included existing legislation, the on-going process of implementing SEA in national legislation in Sweden and the results of research reports on the topic. Furthermore, the results of the review of six comprehensive municipal plans form a basis for the discussion.

The conclusions consists of an analysis of the *country specific challenges* in implementing SEA in Sweden with regard to the institutional preconditions for the implementation of the directive and the findings of the *current practice of applying impact assessment at the municipal level*. The discussions that follow are based upon speculations as to what *impact the implementation of the SEA directive* can be expected to have with regard to the current practice and other issues considered to be specific for Sweden, that are in themselves considered to be of relevance for future SEA implementation.

However, it must be kept in mind that the conclusions are based on limited material and are principally meant to illustrate the overall trends and identify the need for further studies.

In order to be able to draw all-encompassing conclusions regarding the experiences of the implementation of SEA in terms of comprehensive municipal plans, further research is needed. This is identified at the end of the chapter.

Country specific challenges

The overall conclusions from the review of the status of the national implementation of the SEA directive, based upon interviews and attendance of meetings in the reference group for the implementation of the SEA directive in Sweden, are that it is difficult to establish an overall picture of the way that the SEA will be implemented in Sweden. It is still as yet undecided as to which legal framework and processes the requirements for SEA will be introduced into, as well as to which governmental institution or agency responsibility for implementation will be given. At present there are two likely alternatives for the introduction of the SEA directive into existing legislation. The first alternative includes the inclusion of the requirements into the existing legislation and the continuation of the existing requirements for impact assessment, e.g. the Environmental Code, the Planning and Building Act and the Road and Energy Acts. The second alternative is an implementation solely in accordance with the EU

and includes the integration of the EIA and SEA procedures in a separate act. The advantage of this option would be that it would provide for more clarity, in particular with regard to the public and their ability to relate to a single process. The pros and cons of the different alternatives are presented in a paper by Peggy Lerman (Lerman, 2003).

With regard to the potential outcome of the application of SEA to municipal planning, it is important to relate these to the roles and functions of municipal plans in environmental considerations in land use decision-making. The municipalities argue that the context for planning is changing with regard to the requirements in respect of environmental considerations. This trend is also acknowledged in national studies on the planning systems (Christoferson, I, (ed), 2001)). Changes in the PBA, as well as external factors such as the EU directive, international conventions on sustainable development and ongoing work towards Agenda 21 at the national and local levels, have all influenced planning practice. The main causes identified for these changes include requirements introduced as a part of EU membership (with NATURA 2000 and the EU Water directive), new planning directives for sustainable development and Agenda 21, as well as new requirements in the PBA (more emphasis on the strategic element of the plan, consultation and impact assessment) and the introduction of the Environmental Code in 1999. However, it is likely that the application of the directive will adhere to the existing sector approach that can be seen as typical of the Swedish style of policy making in a wider context (Böhme, 2002), e.g. with regard to the responsibility and accountability that lie within the different authorities with regard to planning, as well as in the context of Environmental Impact Assessment. With respect to Strategic Environmental Assessment, the sector authorities have initiated research, as well as suggested processes and methodologies for the environmental assessment of plans and programmes. Furthermore, substantial responsibility is given to the municipal level with regard to the management of environmental and planning issues with limited control and supervision from the national level. The non-existence of a regional planning level further strengthens the autonomy of the municipal level, which is likely to be an issue with regard to the implementation of the SEA directive.

Current application of impact assessment at the municipal planning level

The existing requirements for impact assessment in the PBA form an important basis for speculating on the potential impacts of the introduction of EU requirements on SEA to the Swedish planning system. As of 1998, the impacts or consequences of comprehensive plans must be stated

clearly in plan documents and must be available during the public participation process. The requirements have established a practice that potentially forms the basis for the implementation of SEA at the municipal level. However, the requirements in the PBA are not very specific, e.g. the process that the Impact Assessment shall adhere to is not stipulated in the PBA, apart from the requirements of including the description of impacts in the consultation process and the presentation of the plan. Furthermore, the requirements are probably aimed at a wider framework than that given by the planning and building legislation (Käärrik and Svensson, 1999, Boverket, Naturvårdsverket, 2000). This comprehensive plan 'impact analysis' may best be described as an attempt to integrate different types of impact assessments, in order to give a broad base for decision-making (Lerman, 1997). Meanwhile, concerns are raised that the scope of



Figure 6. Planning context for introducing SEA to planning at the municipal level

the impact analysis is too broad and the results too general, and thus not particularly useful for decision-making purposes (Emmelin, 1997).

On the basis of the review of the six municipal plans, it can be concluded that the assessment chapter corresponds, in most cases, to the structure of the plan, and the proposals chosen for assessment are organised in the same way as they are presented in the plan. Furthermore, the

level of detail presented in the plan (e.g. the general character of the plan) is also reflected in the impact assessment chapter.

The focus of the impact assessment is not limited to the environmental aspects of the municipal plans, but also includes social and economic aspects. The aspects of the environment that are included in the municipal plan and addressed in the impact assessment differ greatly. Moreover, the environmental components of the assessment are not always easily identifiable in all of the plans studied. However, most of the municipalities explicitly mention the national environmental goals, as well as the application of those at the regional or municipal levels.

The assessment is largely non-integrated, i.e. the results are presented in a specific chapter with limited reference to the proposals presented in the plan, i.e. the way that the assessment has influenced the proposals or how the aspects chosen to study link to the decision that have been made as a part of the planning process. One exception to this being that Kungälv reports specifically about the linkages between the impact assessment and the planning proposals and how the impact assessment has affected the formation of the proposals. In addition, Karlstad makes an attempt to illustrate the linkage to the decision making in the impact assessment chapter, with a specific column in the impact assessment table (where the positive and negative impacts are illustrated) presenting the decision presented in the plan.

The methodology used in the impact assessment is usually not presented and it is not clear at what stage in the planning process the Impact Assessment was carried out, nor how it affects the outcome. Furthermore, it is not usually clear who was responsible for carrying out the assessment.

Coverage of sustainable development and indicators

Sustainability aspects are well established in all of the plans and are included in the overall aims of the plans. Several of the plans see the requirement of impact assessment as a part of the planning process and as a way to achieve sustainability, although this connection is normally not clear in the impact assessment chapters. In some of the municipal plans, the focus away from the environmental emphasis is a very deliberate choice, arguing that environmental issues cannot be looked at in isolation, i.e. out with their economic and social context. As a result, the different proposals presented in the plan are assessed with regard to different indicators; some of the sectors are mainly assessed with regard to the economic impacts, while some were assessed with regard to social or environmental impacts. The general impression from the municipal plans studied is that when the municipality considers the three aspects of sus-

tainability simultaneously, the results are often quite general and may decrease the transparency of the decisions. Furthermore, the coverage of environmental issues is not as explicit.

The usage of national environmental goals and their relation to the impact assessment work is a characteristic trait in the municipal plans studied. All of the municipal plans studied here mention the environmental goals as a framework for working with environmental issues in the plan, either the national goals, the regional ones or environmental goals developed in the municipality. The extent to which the connection is made between the goals and the indicators used to assess the environmental impacts of the plans however differs markedly between the plans.

However, the national environmental goals (and indicators developed to measure them) have been criticized for focusing largely on aspects of the physical environment and, as highlighted by Hedlund (2000), the choice of indicators is not purely a scientific issue, but needs to be identified and understood by several different stakeholders. Furthermore, the question arises as to whether the basis given for future SEA work with the existence of the environmental indicators will lead the focus away from the over-arching aims of the SEA process and will be instead preoccupied with developing methods to fulfil the environmental goals? This phenomenon is an interesting characteristic of Swedish planning practice, and will be an important issue of study in future research on the implementation of the SEA directive.

The potential impact of the implementation of the SEA directive

The overall question raised at the beginning of the study was: What will SEA add to the existing planning process in Sweden? On the basis of the review of the application of the impact assessment requirements in the municipal plans it can be concluded that the implementation of the SEA-directive will require some changes from current planning practice. The review illustrates that although examples of the requirements listed in the SEA directive are already being undertaken on a voluntary basis, the practice of impact assessment differs greatly between the municipalities. This is particularly the case with regard to the transparency of the methods used to assess the plan's impacts, as well as how the results feed back into the planning proposals. A potential explanation here is that the Planning and Building Act is vague in its requirements on the impact assessment of plans. As a result, the outcome of the assessments performed by the municipalities vary a lot in ambition and aspects included.

The new requirements introduced by the SEA-directive can be expected to lead to the introduction of minimum standards with regard to

the aspects addressed, and the process and reporting of the Strategic Environmental Assessment in land use planning.

However, all of these processes will be dependent on the actors' commitment and knowledge, as well as on the economic context and the political climate.

However, the introduction of the SEA directive will require monitoring of the implementation of individual aspects of the SEA process, as well as reporting, by both public bodies and the County Council.

Among the possible consequences of the implementation of the SEA directive is the requirement for the standardisation of the SEA process between the different member countries. A possible consequence of this is the increased 'rule of law', i.e. a strengthened role at the national level with regard to monitoring by public authorities at the national level, as well as the possible need to develop a reviewing mechanism at the regional level¹⁷.

Issues for further study

With regard to the aspects that have been carried out at the national level, most of the studies have focused on developing a methodology and guidelines for the implementation of SEA. From a research point of view, the empirical basis and the theoretical aspects are relatively undeveloped. Furthermore, the experience of the existing requirements on Impact Assessment in municipal planning has not been followed up systematically. In order to gain a fuller understanding of the conclusions drawn out above further research is needed to determine whether the trends identified in the study are correct, and to get more comprehensive answers to the questions raised at the beginning of the study. This includes more thorough research with regard to both the number of plans reviewed as well as a more detailed examination of the specific aspects of the SEA process. Issues that would be interesting to study in more detail during the later stages of the work include how the environmental aspects were integrated into the planning work, as well as the participants' experiences and their views on the purpose and usefulness of the work. Furthermore, the methods used for the analysis and presentation of the facts needs to be studied in more detail. Finally, aspects of public participation were not dealt with during this part of the study, nor was the issue of tiering or the connection to the requirements presented in detail planning.

¹⁷ Information from a meeting at Naturvårdsverket and answers from interviews from Sten Jerdenius, 30. September 2002.

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Impact assessment in Swedish planning

Peggy Lerman

Introduction

With the purpose of promoting sustainability through protecting the environment, plans¹ with significant effects should integrate environmental consideration². This should be done in accordance with the EU directive 2001/42/EC (On the assessment of the effects of certain plans and programmes on the environment), on environmental assessment, though there are of course other means of achieving the same goal.

The directive provides a usable framework for an assessment, with procedural (how to do it) as well as material (what to think about) regulations. Some regulations are more or less optional, at least in their detailed functioning, and the national results are yet to be seen. There is as yet no published proposal on the changes in Swedish legislation. By summer 2004³ however practitioners will need to be fully trained and ready for implementation. Planning activities currently ongoing would be wise to already consider the directive though, to avoid the need to retrace steps when the directive does come into force.⁴ The aim of this contribution is to discuss the possible legal scope of the EU directive.

Progress in Sweden

Impact assessment in planning is not something new, neither in legislation, nor in practise. Road planning received a formal demand for Environmental Impact Statements (EIS) as early as the mid 1980's and several other sectors followed suit. Of course the system of EIS for road plans is close to that of EIS for projects, nevertheless it remains a plan, and the difference is important. A 'purer' plan or even programme in this regard would be the municipal energy plan, with both legislation on assessments

¹ Plan is used here as shorthand for the plans and programmes covered by the directive.

² Article 1.

³ Articles 13 and 14, with the day of publication being July 21st.

⁴ Article 13.3 ... Plans ... of which the first formal preparatory act is before that date and which are adopted ... more than 24 months thereafter, shall be made subject to the obligation ... unless Member States decide on a case by case basis that this is not feasible and inform the public of their decision.

and good practise guides developed during the 1990's.⁵ Municipal land use planning also received a formal demand for impact assessments at this time, in respect of both comprehensive plans and detailed development plans. The practice has thus developed over time and with the aid of research and cooperation with other countries, while many municipalities now regard impact assessments as an evident part of planning.⁶ The decision of issuing legislation that must be regarded as a type of programmatic decision, has received a formal demand for an impact assessment. The demand only covers regulations from national boards, regional and local authorities though (not the parliament or government) and the practise is not evaluated. Another formal request for implementing SEA, based on no known practice or experience, concerns the introduction of new methods or species in fishing and forestry.

The possible scope of the EU directive in Sweden

Tricky system!

What types of plans must have an assessment in Sweden, with the directive in force? There are many 'ifs and buts' before we get a clear picture of what is covered by the directive, though it is clear that not much is left for assessment, if all possible exceptions are used. What the Swedish legislator (Riksdagen) chooses to do is another question though. We may go much further than the directive or be happy with the minimum requirements.

What is the minimum requirement? The system is based on the fact that, certain plans are screened out by the directive itself, while other plans must be screened (selected in or out) by the member state.⁷ The first step then to understanding what plans are to be covered, is to sort out the plans that are clearly not under the directive. Plans for national defence or civil emergency as well as financial or budget plans are all screened out.⁸

⁵ See the guides 'Milen' from the National Board for Energy 'NUTEK'.

⁶ See manuals from the National Board for Planning 'Boverket', Boken om översiktsplan, Boken om MKB för detaljplan.

⁷ Note that no exclusion is accepted for plans that may cause significant effects on the sites of *Nature 2000*. These plans always need an assessment according to that directive, to consider the implications for the site, in view of the conservation objectives. Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, article 6.3.

⁸ Article 3.8. Note that 'screening' is a word normally used for the activity when deciding whether an assessment should be made or not (behovsbedömning). The directive says that article 3 is about scope. That word is normally used for the activity when deciding what to assess (avgränsning). But it also means to what

Informal (voluntarily performed) plans are also out.⁹ Plans with less than significant environmental effects are out too, of course.¹⁰ A special category of potentially insignificant plans in this regard is that which determines the use of small areas at the local level.¹¹ We will return below to the means by which it is decided if such plans are in or out.¹² Finally, plans that do not set a framework for future development consent of 'EIA-projects' are out.¹³

Now, let us see what remains. The directive implies step two, by giving examples of sector plans where an assessment should be performed in case of significance, namely plans for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use.¹⁴ But there is also a general clause, which makes it necessary for the member states to determine whether there also are other types of plans, that set a framework for coming projects and that also may have significant environmental effects.¹⁵ They should in that case have an assessment.

We have several plans in Sweden concerning energy, waste and so on, and we have many plans that precede projects, but that does not make an assessment mandatory. There are more steps to check before we know that!

How formal is formal?

The directive is (of course) limited to formal plans, meaning that the plan in question be required by legislation, regulation or administrative provision. Depending on the interpretation of 'provision' though, we may have a longer or a shorter list of potentially mandatory plans.¹⁶ For exam-

extent must we follow the directive, meaning what is the directives reach? So despite the heading 'scope', the article lays down rules on screening.

⁹ Article 2.a.

¹⁰ Article 3.1.

¹¹ Article 3.3.

¹² See the criteria in annex II.

¹³ This is related to the demand for EIA in directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, amended by directive 97/11/EG, and only projects listed in Annexes I and II must be considered.

¹⁴ Article 3.2.

¹⁵ Article 3.4.

¹⁶ The Swedish translation is 'lagar och andra författningar'. This should include 'riksdagens lag, regeringens förordning och myndigheters föreskrifter'. But note that the wording regulation/provision also means 'bestämmelse' and therefore it

ple, when the government gives an order to its sector authorities it is of course formally binding for the receiver (a national board for example). But is this order accepted as an administrative provision?¹⁷ And how about the recommendations ('allmänna råd') from the national boards to different actors, asking for plans for certain purposes such as water management, saving energy or taking care of natural values?

Several of the sector plans in practise today are certainly screened 'out' from the mandatory demands by this prerequisite of formality, since they are only internal working documents not required by any rules. They might, like all plans with significant impacts, benefit from an assessment, but it lies in the hands of the legislator to decide whether they will be formalized or not.

A list of formal Swedish plans should include at least the following:

- Municipal physical planning under the Planning- and Building Act (1987:10), mainly the Comprehensive plan (chapter 4, 1 §) and the Detailed development plan (chapter 5, 18 §) and Regional plan (chapter 7 but thus far only applied to the Stockholm region).
- Infrastructure, planning for systems and the allocation of money (national 1997:262, 3 §, 1989:67, 3 §, and regional 1997:263, 4 §).
- Infrastructure, planning for the localisation of roads and railroads (initial study 'förstudie' and alternative corridor study 'utredning' regulated in 1971:948, 14b § and 1995:1649 chapter 2, 1a §, with it's regulations and administrative provisions).
- Municipal energy planning (1977:439, 3 §).
- Plans for public water- and sewage systems (1970:244, 12a §).

might include 'allmänna råd', meaning counselling advice from authorities based on formally binding rules. Such advice is published together with binding regulations ('författningssamling') for every authority, and this may very well be included in the wording of the directive. We will see what the Swedish interpretation will be!

¹⁷ These assignments, 'regeringsuppdrag', may be given in government proposals to the parliament ('propositioner'), in specific decisions aimed at the authority or informally given in the continuous dialogue between departments and boards. At least when the demand for a plan is in a proposal it may be considered formal enough to be covered by the directive.

- Programme decisions by the National boards for Fishery and Forestry to use new methods for fishing/forestry (1993: 429, 32 §, 1993:1096, 31 §, 1979:787, 20 §, 1994:1716, 12 §)
- The programme decisions about claims for protection of certain areas of national interests ('riksintressen') under the Environmental Code, chapter 3, the geographical 'plan' developed by different national sector boards (1998:896, 2 §).
- Activity plans/programmes in relation to environmental standards (1998:808 chapter 5, 5 and 8 §§).
- Future 'water plans' under the frame directive of water protection.

The above-mentioned plans are both formal and of relevance for planning future projects. But what about the following plans, are they reasonably formal?

- Municipal waste plans (EPA¹⁸ 1991:3).
- Adaptation plan for waste sites (2001:512, EPA 2002:17).
- Regional plans for adding limestone to 'acid' water systems.
- Regional management plans for the use of gravel/sand.
- Regional management plans for the coastal zone.
- Regional environmental quality plans.¹⁹
- The national programme decision by the Board for Post- and Telecommunications on telecommunications systems, such as '3-G'.
- National wetland protection plan.
- Forestry plans for deforestation and for the management of the forests.²⁰
- Agricultural plans.²¹

Though we have not sought to search deeply for plans with a legal base, but rather we have made only a swift 'scope' of some home pages, the list nevertheless gives us reason enough to believe that there may be several plans of interest for the directive. Even if all the above plans, and many more, are formal enough, they may be omitted for other reasons.

¹⁸ The Environmental Protection Agency, Naturvårdsverket.

¹⁹ Regionala miljöanalyser, planer för hantering av miljökvalitetsmål m.m.

²⁰ Skogsbruksplaner och avverkningsplaner, Skogsstyrelsens författningssamling.

²¹ Växtodlingsplaner, Jordbruksverkets författningssamling.

There are however yet more steps to take before we reach the screening decision.

One such question is if the plan leads to *significant* impacts, while another concerns whether it is a *relevant* impact. The last issue is related to the fact that some of the plans above have environmentally friendly purposes. But they may still cause damage to other 'parts' of the environment. Nature conservation plans that forbid activities in an area may for example lead to a decline in cultural values (this is already a problem in Sweden).

When is an open legislation (in Swedish 'ramlag') firm enough?

A plan with lack of connection to projects listed in the EIA-directive is screened out. The connection depends, among other things, on what we mean by 'framework'. If it stands for a formally binding connection, we can for example screen out the comprehensive municipal planning under the PBA. If we accept 'binding by argument and knowledge', that plan is still in the system though. We will soon see what the Parliament regard as suitable for our decision-making. This evaluation of the connections must be made for every (reasonably) formal plan by the legislator, who must assess whether and how the plan influences projects. How about municipal waste plans, or the different types of management plans? They may very well be of interest for placing and forming coming projects as well as the revision of today's installations (which also may need a permit). The national decision about '3-G' definitely set a framework for the projects that are now following in its wake. An assessment before the national decision would certainly have made it possible to discuss landscape impacts in such a way that is now totally impossible in each and every local building permit. That boat has thus sailed, and thus needs no further comment except that it might be a good lesson to remember for future national decisions of this type.

What is an authority?

What can be defined as an authority? This is not a philosophical but a very practical question. The request for formality means not only legal base, but also that the preparation or adoption must be made by an authority. What plans fall out of the system then? Municipal physical planning in Sweden is for example governed and adopted by the council. The council is not an authority, in the formal sense. And we should remember that only plans of minor importance might be adopted by an authority

(i.e. the municipal planning- and building boards).²² Such a minor plan is definitely not obliged to have an assessment according to the directive, however; it is not of significance.

Will the Swedish interpretation of the directive be that municipal physical planning under the PBA is 'formal', because the preparation is done by civil servants? Or will it be interpreted as 'not formal' because of the binding mission from and the continuous steering by the council?

What plans will we miss?

Missed plans, in the sense that we would like to have them in the system, might be plans with small environmental effects but major societal effects. They may for example influence the way people live; make life more difficult by creating unpractical structures for travel, shopping or day care for children. They may have significant impacts in view of equal living for women and men, or for unemployment. This question is obviously connected to the definition of environment and significance. The future will show if practise will catch plans of interest or if we will miss some of them.

What is new?

Business as usual?

The directive itself poses no significant problems to existing practice in Sweden. We are already undertaking such actions, and indeed we have been for many years. Have you heard that before? At least in Sweden, it is a fairly common remark among practitioners as well as within the administration. Well, the reality is perhaps somewhat different.

Screening must be upgraded!

The directive clearly demands that significant plans must be identified either through case-by-case consideration, a specification (list) or a combination of these approaches.²³ But we already have a 'list' in Sweden, you may say, since we have a formal request in (most of) the laws in question. It is regulated, for example, in the PBA that the consequences of a comprehensive plan must be able to be read (and understood) without difficulty.²⁴ It is also written in law that regional infrastructure plans should include an assessment, with a statement of the impacts on the po-

²² The Planning and Building Act (1987:10) chapter 5, 29th paragraph, opens up the possibility for the council (fullmäktige) to let the governing council (kommunstyrelse) or board (nämnd) adopt certain plans.

²³ Article 3.5.

²⁴ PBA chapter 4, 1 §.

litical goals for the transport sector (environment and equality among others).²⁵ Almost all of our planning laws have such a rule about mandatory assessments. When we put all the rules together, we get a kind of a list.

Yes, the above is correct. We have obligatory assessments here and there in the laws and regulations. But the directive implies that the 'list' is based on an evaluation whether that type of plan typically leads to significant effects or not. And that evaluation must be based on the criteria given by the directive.²⁶ Moreover, the evaluation includes consultation with the environmental authorities.²⁷ And finally, the reasons for not demanding an environmental assessment for a specific type of plans should be published.²⁸

Perhaps the consultation undertaken during the legislative procedure is enough to fulfil the demand for participation (probably not though), and perhaps the official journal for laws is public enough, but it is unlikely that the given criteria were not debated when the laws in question were produced. Finally, a concrete explanation of the motivations for not having assessments is nowhere to be found. Our conclusion must therefore be that the 'list' was not properly prepared.

But what then of the question over detailed planning under the PBA ?²⁹ That must be a correct case-by-case screening in accordance with the directive? Absolutely not. The planning body does not have to consult authorities with specific environmental responsibility, whether they should make an assessment or not.³⁰ Furthermore, they are not obliged to use any type of criteria at all, but can draw the line for significance anywhere they like. In addition they do not have to publish their reasons for not making an assessment for that specific plan. So, not even detailed planning is regulated according to the directive.

Build upon today's system?

The conclusion then is that Sweden must construct some kind of system for screening. Should we then have a list of the types of plans that are screened out from the directive? That would be an exclusive list, meaning

²⁵ 1997:263, 4 §.

²⁶ Article 3.5 and annex II.

²⁷ Article 3.6.

²⁸ Article 3.7.

²⁹ PBA chapter 5, 18 §. An impact assessment must be made if the plan allows land use that implies significant impacts on environment, health or management of resources. In other cases, an assessment is not necessary.

³⁰ Article 3.6 compared to PBA chapter 5, 18, 20, 21 §§.

that these plans will never have to be screened case-by-case. Or should it be like PBA today, a mandatory screening case by case of every plan?

What is the big deal here? Just make a mandatory demand and let the practitioners sort out the big from the small.³¹ Oh, no. Not again. Why do we dwell on this question? Just wait and see if all of the formal steps may be regarded as environment-money well spent in every plan! Remember, all plans that are not screened by the legislator, must follow the procedural screening steps. And a mandatory demand (screened 'in' by the law) actually means that the legislator has stated that all plans are presumed to be 'significant'. Then the planning should follow the rest of the formal demands in the directive. Just think about all the possible plans (PBA, infrastructure, energy and so on) and think about other possible tools for environmental consideration. That is the big deal.

Save SEA for the significant plans and note that the directive underlines the possibilities of avoiding duplication.³²

Consultation or changing power?

Today we have no consultation in screening.³³ We do not even have a single procedural rule for screening (not even for projects). New rules need to be drawn up in other words. Who to consult then, in the future, and what will the consultation stand for? Talking or strongly recommending something, or deciding?

Planning under the PBA will probably be in consultation with the County Administrative Board (länsstyrelsen), since that administrative unit represents the state in all other consultations under the PBA. But are the County Boards 'environmental' enough in the eyes of the directive? Must we regulate who, within the board, should participate in the consultation or is it all right with the directive if we leave it to the planners?³⁴ Is

³¹ It will be like today's system for project-EIS, where almost all types of projects, large and small, have mandatory early consultation with the County Board. Very few of them are judged to be of significance and therefore are covered by the project-directive. Resources well used? Maybe that is one reason why we have few good EIS's; we make too many small ones to have the energy left for the big ones.

³² Article 4.3 as well as the introductory text in the preamble.

³³ Screening only occurs in the following rules: 1998:1252 § 23, 1998:904 § 8, 1990:899 § 25, 1984:14 § 3a & 14a, 1998:929 § 3, 1987:10 chapter 5 § 18, 1993:1096 § 31, 1994:1716 § 12. The other twenty laws have mandatory assessments but the scope varies according to the scale of the decision. The scope (large or small) is decided by the verdict 'significant' or not by the County Board in question.

³⁴ Article 6.3.

there competence enough within the County Board to handle all such questions, for example health (medical expertise) and risk? Or must the national expert boards be consulted too by the planning authority? Or perhaps instead of the County Board?

What about plans where the County Board is doing the planning itself? Will they consult national boards and neighbour regions or talk among themselves?

Municipal plans other than physical planning, will the County Board take care of them too? Or should the national board in question take over, to get and give a national overview?

What will be the role then, of the consulting authority? Good advice, as it is today in the PBA, or binding statements as it is in every other assessment legislation in Sweden? Depending on the solution, power may swiftly move from one decision body to another. It is only to be expected then that a debate will soon occur about the possible impacts on the planning monopoly, that today lies within the Swedish municipalities.

Public or published?

Today we never publish the few screening decisions that are taken (not in planning or for the projects). But do we need to, since all decisions are public (not secret)? It is not enough that the document is available for anyone. You have to know there is something to see, to be able to ask for it, right?

How to publish then, in the future? If we get a mandatory demand, there must be an official statement for every plan that does not need an assessment. If it is not regarded as enough with a notice on the municipal publishing board (that no one looks at), there must be a public notice in the local paper. Notices are expensive and the costs will add up... at least in the big cities where small brief-stamp-plans are frequent but the newspapers are large and expensive. The notices may also confuse the public. Quite a number of municipalities today make voluntary assessment for all plans, also small ones. In most cases the municipality does not really care if the plan is significant or not, they just think it is good practise. And since there are no procedural or material rules, it does not matter so much today. But tomorrow... First the public reads a notice that explains why there will be no (directive-) assessment, since the plan is insignificant. Then there is an assessment nevertheless (a small one) when the plan is made public. Was it significant after all? And is that assessment really big enough? Does the municipality really know what they are doing?

Consultation about scope may increase quality?

As well as the screening decision, the planner's decision about scope, including the level of detail, should be prepared in consultation with the environmental bodies. The public is not a mandatory actor though.³⁵

Today, some plans undertake consultation processes already during the planning procedure or in connection with the adoption. In the last case, it is obviously too late to call it consultation about scoping. But in the other cases, it may be in accordance with the directive. Infrastructure planning is, for example, partly using the project-system in the Environmental Code in addition to its own sector rules.³⁶ That must be deemed sufficient. The infrastructure planning for the system itself has (in comparison) more poorly treated the question of consultation though.³⁷ The planner consults with national boards, regions and municipalities and in some cases 'organisations' (not specified what types). The public is not mentioned. But even if it may be described as poor, it may still be in accordance with the directive. It is not clear though, that the consultations should be about the scope as well as other issues. That may need clarification.

Municipal physical planning has several rules with regard to consultation about the plan and the rules are also used for any assessments made.³⁸ It is not clear here either though, that the consultations should verify what issues to cover in the assessment, what methods to use, the level of detail and so on. New rules are again needed. Many plans have no rules at all with regard to consultation, although there may be voluntarily consultation of course. But the directive is only interested in binding rules.

Concluding, plans that today are connected to the Environmental Code and the PBA are perhaps heading somewhat in the right direction when it comes to consultation, but they still do not fulfil the directive. It is not clear enough that the scope should be addressed in the consultation and of course there is no reference to the criteria in articles 5 and annex 1. Moreover, can we really say here that *all* relevant parties are involved?³⁹

³⁵ Article 5.4.

³⁶ See the Road Act 14 b § and 16 § leading to the Environmental Code chapter 6 § 5, in addition to rules on consultation about the road itself in the Road Act 16 § and 1971:954 § 27. There are also (very good) internal rules about consultation in road assessments in VVFS 2001:18 from the National Road Association.

³⁷ 1997:262 § 5-6, 1989:67 § 5, 1997:263 § 10.

³⁸ The PBA chapter 4, § 3-8, chapter 5 § 20-27.

³⁹ Article 6.3.

Forthcoming problems with reasonable substance?

Plans that are currently connected to the Environmental Code have a list to follow for the EIS, similar to annex I of the directive.⁴⁰ Most plans have no guidance to lean on concerning the focus/content of the actual assessment. The support you get concerns only the purpose of the assessment. The formulation of the purpose does however not give any substantial guidance: ‘making possible a holistic assessment....’⁴¹

What needs to be assessed in future planning? This is a tricky question too, both to regulate and to apply, since plans vary greatly. Can we really have the same rules for energy plans, for waste management, for physical plans and for infrastructure? Absolutely not, at least not if it is a detailed regulation. It will not be applicable. The directive has a practical approach.⁴² The assessment and its documents should be reasonable, depending on:

- The purpose and geographical reach of the plan.
- The actual content (what issues are handled in the plan).
- The connections between the plan at hand and other plans or decisions (above and below, if there is a hierarchy).
- The level of detail the plan is suitable for.
- Whether the question is better assessed at another decisional level.
- What the level of knowledge is.
- What assessment methods we have.

This analysis of what may be reasonable substance is too hard to do on ones own, one needs a lot of wise, interested, experienced people. We are lucky to have consultation, right?

The practise of project EIS is not encouraging though. Far too much is left unsaid during the consultation and thus instead important though apparently ‘dormant’ issues ‘resurface’ during decision- making. The issue is then often presented in the form of requests for additional investigations. That is a practise that slows up decision -making and it is not environmentally or cost efficient; it is too late to influence the project (or plan) and unnecessarily costly. The reason for such bad scoping is partly related to the numerous EIA-procedures and the few people available to handle them. Perhaps another reason relates to the culture of decision-making, where the authorities are used to getting what they want

⁴⁰ Only the Road and the Railroad Acts.

⁴¹ For example PBA chapter 5 § 18, 1997:262 § 3, 1989:67 § 3, 1997:263 § 4.

⁴² Article 5.1, 5.2, 5.3 and annex 1.

(needed or not) at any time before the decision is actually taken. This is indeed a bad habit.

The scoping of plans is a mission far more complex and difficult than it is for projects. It is extremely important that all concerned actors really act at the early stages and do not leave it until the end. Otherwise planning will start only when the plan is done.

Interesting issues to investigate?

When it comes to the content, in most planning laws today we have a demand in Sweden to identify, describe and evaluate significant effects on the environment.

We must also identify, describe and evaluate reasonable alternatives. This is old news for municipal planning under the PBA (where once there was even a specific demand for alternatives, now gone though) and business as usual for road and railroad plans.⁴³ For all other types of plans, it is really news. An interesting development of methods is needed, to be able to describe alternatives in a meaningful way for the different types of sector plans.

In future we must, in accordance with the directive, and in a reasonable way, describe:⁴⁴

- The state of the environment and the likely evolution without implementation of the plan (WHAT is that zero-alternative in planning?)
- Environmental characteristics of areas likely to be significantly affected environmental problems and environmental protection objectives.
- Significant effects (secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative) on the environment, including on issues such as:

Biodiversity

Population

Human health

Fauna, flora

Soil, water, air, climatic factors

Material assets

Cultural heritage including architectural and archaeological heritage

Landscape

⁴³ 1971:948 , 1995:1649

⁴⁴ Annex I.

and the interrelationship between the above factors.⁴⁵

The meaning of the above words varies depending on the reader. The project directive has certainly been interpreted differently, particularly when it comes to the issue of impacts on society. Moreover it is highly likely that the meaning of these words in this directive will differ even more between countries. That is not strange; plans are very different. It is however as yet too soon to tell what problems this may involve for practise in Sweden.

The draft must be public!

Finally, the public is allowed into the decision -making procedure. Before the decision is taken, certainly, but not until there is a draft plan with its assessment.⁴⁶ In many cases, such as with a strategic and political plan, it may be unsuitable and impractical to have public consultation before there is anything concrete to discuss. But in other cases it should be both practical and proper to take the question to the public already when the scope is decided.

Note that the directive implies time frames as well as timing.⁴⁷ Consultation should be both early and effective. Before adoption early? Surely not. It is to be hoped that our rules will not regulate public participation in a general manner but rather will adapt the rules to each plan at hand, so it can be as early as possible as well as efficient, preferably with time frames for all actors.⁴⁸

There is one small problem with the name of the assessment in Swedish. Possibly misunderstandings will occur when we call the document 'miljörapport'. That name is already taken. It is the annual report from companies to the controlling agencies about environmental work done.⁴⁹ Is it now too late to change this?

Decisions showing motives are appealing!

Today we are expected, in a general way, to listen and think before we decide, but the planning rules have very little to say about this. Only plans connected to the EIA-system in the Environmental Code demand

⁴⁵ There is also a demand in the directive to describe difficulties, to have a summary and so on, but here we have focussed on the 'impact-part'.

⁴⁶ Article 6.1.

⁴⁷ Article 6.2.

⁴⁸ The directive gives the power to the Member States to decide about consultation, article 6.4 and 6.5.

⁴⁹ 1998:808, chapter 26, 20 §, EPA 2000:13.

that we pay attention to the assessment.⁵⁰ The rule is rather vague though and very few plans have a connection to the Environmental Code.

Several plans are connected to the management rules in the Environmental Code however.⁵¹ Those plans must follow a specific rule about motivating decisions in relation to the municipal comprehensive plan as well as the management rules.⁵² This is a regulation seldom followed however. But it is there. In this regard it is to be hoped that the directive may improve its application. Perhaps the following section is the most useful part of the directive.⁵³ The environmental report and the opinions expressed therein shall be taken into account during the preparation as well as before adoption. When a plan has been adopted, the authorities and the public should be informed and the plan with a statement made available. The statement must describe:

- How environmental considerations have been integrated into the plan.
- How the environmental report has been taken into account.
- How the opinions have been taken into account.
- The reasons for choosing the plan, in the light of the other reasonable, alternatives dealt with.
- The measures decided concerning monitoring.

This absolutely must lead to new traditions in decision- making (as well as new rules of course). We are already good at analysing and knowing what to do, but seldom good at explaining how we got there. Our hope should then be that in future, we will have much more interesting decisions to read. It will give grounds for a more substantial debate.

Follow up, and learn by mistakes!

Today only the road sector in Sweden has rules (worth mentioning) on monitoring.⁵⁴ Not even the Environmental Code has good rules on ‘follow up’; those that do exist are indirect and vague.⁵⁵ In future, we must

⁵⁰ Chapter 6 § 9 ‘beakta’. Note that this word may mean a lot of different things, from ‘listen and forget’, notice, remark, pay regard to, consider or maybe even ‘obey’? Or is the last interpretation to lay too much weight on the word? Probably.

⁵¹ See the list of acts in chapter 1, § 2 of the Code.

⁵² 1998:896, § 5.

⁵³ Articles 8 and 9.

⁵⁴ VVFS 36, 38 §§.

⁵⁵ See chapter 16 § 9, chapter 22 § 25 p 3, p 4, p 6, p 9, p 10, chapter 26 § 19, 1998:901 § 6.

have an idea about how and what to monitor.⁵⁶ But this means that a lot of questions have yet to be solved. What are we monitoring ‘against’? What is the base line, and what is zero the alternative?

Potentials or drawbacks?

The directive certainly has a lot of potential! What good it will do the environment lies very much in the hands of the national legislator though. Every country must build on its own traditions and existing laws, of course. But it is also necessary for every country to take a step back and look at the WHOLE decision-making system, to see what system will serve the environment best. The total sum of all the rules in practise is what counts, not one law on its own. Put them all together and see how they work in real life!

The Swedish experiences of a system with mandatory EIA for all projects (in principle) and a case-by-case scoping of all the EIS’s, shows a hard burden on the administration as well as the public and poor procedures with bad documents. If a similar system is chosen for the plans, we may be stalked by a *Kafkaesque* future with unnecessary bureaucracy and no wiser planning as a result. If the system is built on an evaluation of what plans really matter, and a focus on them with clear (and strict) rules, then we can have reason to believe that the directive will improve not only planning but also the decisions and by that, the environment.

⁵⁶ Article 10.

Concluding remarks

Tuija Hilding-Rydevik

The need to implement Environmental Impact Assessment (EIA) for plans was an idea that was already being discussed, internationally, in the mid 1970 (Rodgers 1976). Such notions were later expanded to encompass the additional areas of policies and programmes. The concept of EIA for PPPs (plans, programmes, policies) was thus 'invented' and the term Strategic Environmental Assessment (SEA) was subsequently introduced with reference to impact assessment for so called strategic level planning and decision-making. The level of expectation surrounding SEA has over the last twenty years developed into a veritable 'cottage industry' with researchers and officials producing a large number of books, scientific articles and official reports, not to mention also the numerous attempts to provide guidelines. The expectation that SEA can steer planning and programming practice in an environmentally sustainable direction is thus continuously propounded. As such, SEA is in many instances expected to contribute to the implementation of planning practices that are in line with Sustainable Development. Implementation of the EU directive 2001/42/EC: *On the assessment of the effects of certain plans and programmes on the environment* across the countries of the EU thus increases the need to turn existing SEA experience, normative statements and theories into operational legislation and practice.

The actual amount of practical experience garnered in this context is however not particularly extensive when compared for example to the Environmental Impact Assessment of projects. Indeed, the extensive normative expectations and the lack of empirical evidence of its effectiveness and efficiency (Wood 1999, Emmelin 1998) combined with a lack of clear goals for the implementation of SEA (Hilding-Rydevik 2002) highlights the continuing need for systematic and research based projects targeting these issues. A number of these issues, viewed from the academic SEA discussion and from the Nordic countries perspective, have already been presented by Emmelin, Hildén and Valve, Hilding-Rydevik, Hlokk, Hvidtfeldt and Tesli, in the proceedings from the workshop *Nordic experiences of impact assessment of plans and programmes* (Hilding-Rydevik 2002) preceding the project presented in this report. The issues presented from the workshop and in this volume encompass an overwhelming number of research and development issues relating to the

whole R&D field of SEA. The issues put forward also encompass a number of the main issues relating to the development and use of these kinds of 'tools' in general. Thus this report has provided a measure of Nordic input into answering some of the questions posed, but it has also provided a number of new statements with regard to the issues of which we still need to know more.

In the coming years the implementation of the EU SEA directive in the Nordic countries will provide ample opportunities to evaluate the impact of SEA, for example raised environmental awareness and on promoting integration of environmental issues in plans and programmes – to understand what kind of 'intervention' the directive has become. There will also be significant opportunities through research and development to contribute to these general issues. Further studies are needed in order to:

- Explore and develop the concept of effectiveness in relation to SEA implementation in plans and programmes (when can SEA be considered a 'success' and when not) in the long run and for whole national SEA systems and in the short run for each individual SEA process.
- Enhance the understanding of the relationship between the context dependence of SEA and its effectiveness.
- Enhance the understanding of how 'context' can be defined in relation to SEA implementation.
- Further the normative statements of what SEA can be, or what SEA should be but do this from more solid base coming out of empirical studies of SEA effectiveness and performance in different contexts and from different point of view.
- Understand the role of SEA in relation to other kinds of 'tools'.
- Redesign old and develop new context-specific assessment methods in SEA.

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Appendix

Uppsala

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

The SEA in the Impact assessment chapter provides more of a summary of the plan and is thus very general. The impact assessment is only a description of general effects of a plan of this kind and is therefore not strategic. In the plan itself there are discussions of the relation to the region and other municipality-plans surrounding Uppsala, but this is not mentioned in the impact assessment.

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)

Traffic-related environmental issues, land-use and effects on the urban quality

The integration of the Environmental Assessment in the overall plan structure, is it an integrated part or separate document or chapter?

A separate chapter called "Impacts of the plan" (Konsekvenser av plan-förslaget) contains a "Strategic Environmental Assessment" according to the consultants.

- o In the cases where the environmental assessment is integrated in the process, are the environmental conflicts identified or made visible?

Reporting

- o Communication of the results

The report of the results is given in the Impact-chapter mentioned above. The study has been made through a comparison of two alternatives, the 'dense city' and the 'sprawled city'.

- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods have been used

It is noted which consultancy-firm carried out the SEA, but nothing was said of how it was done. There is no description of methods or what has not been taken into consideration when it comes to alternatives.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had for the plan's final preparation work?)

It is not clear when in the process the Impact assessment took place, but it seems as though the assessment has been done before the actual decision on which of the two alternatives to choose was made.

- o Description of the main impacts and the connection of those to the planning proposals

There is no obvious connection between the description of the main impacts and the planning proposals.

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods had been used?

A consultancy firm carried out the SEA. What methods they used are not shown in the report.

Coverage of specific issues

- o Alternatives – What sorts of alternatives have been presented, is the zero alternative included?

There are two alternatives for development of the city presented in the plan. There is a choice between developing towards a dense city or a sprawled city. No other kinds of alternatives are dealt with either in the plan or in the SEA. There is no mention of a zero -alternative.

- o Sustainable development – has it been discussed and how?

Sustainable development is one of six policies that the community has decided on. Apart from sustainable development being mentioned in the assessment, it has not lead to significant differences for the plan as it seems. The policy has not really been used in the “assessment”.

- o The connections to the environmental goals – national, regional and local, how has these been used?

There is no obvious or visible connection between the assessment and environmental goals and objectives either on national, regional or local level, only in an indirect and very vague use.

The overall question addressed in the analysis is to illustrate how the strategic environmental assessment is covered in the municipality planning work. Among the issues addressed are those on how work is carried out in relation to the SEA directive, 'best practice' (and existing guidelines) as well as the objectives for sustainable development.

Malmö

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)

Impacts are described in relation to the goal stated in the plan.

On the regional level, the impacts considered are those of the economic, traffic, social and environmental effects.

On the local (community) level, the impacts are firstly described in relation to the overall development-strategy and then in relation to impacts for the various sectors. The sector aspects were assessed for economic, social, traffic and environmental effects if they could be foreseen.

Integration of the Environmental Assessment in the overall plan structure, is it an integrated part or separate document or chapter.

In Malmö it is separated and reported in its own chapter entitled 'Impact assessment' (konsekvensbeskrivning).

- o In cases where the environmental assessment is integrated into the process, are the environmental conflicts identified or made visible?

Reporting

- o Communication of the results

The 'impact assessment' is nothing but a description since no impacts have been assessed. It is said of it that: "The following is an attempt to describe in what way the municipality-plan's different proposals together can contribute to the goals becoming true".

- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods have been used

Nothing is said of the analysis and who made it.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had for the plan's final preparation work?)

It is hard to say since no convincing assessment has been done, and therefore no proper role for an assessment to play.

- o Description of the main impacts and the connection of those to the planning proposals

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods had been used?

'The impact assessment is a way to, in short, summarize the plan, to focus on important issues and to show possible impacts.'

It is also well described what the PBA demands of an impact assessment, but it is not described what has actually been done. The planning process is described very briefly (p13). In the programme-phase, broad discussions on 18 issues were held among NGOs, in seminars, through exhibitions and articles in the community-leaflet.

Coverage of specific issues

- o Alternatives – what sort of alternatives have been presented, is the zero alternative included?

In Malmö's plan it is described carefully why the planners did not consider a zero alternative relevant and have therefore not used any. The alternatives used in the assessment are today's situation and a fully developed municipality plan. It is also said that where alternative strategies for development exist, the impacts have been described and compared for the various alternatives. (I have not been able to find those impacts assessed though.)

- o Sustainable development – has it been discussed and how?

Sustainable development is discussed in the plan in relation to Environmental norms and goals and in the visions for the community.

- o The connections to the environmental goals – national, regional and local, how has these been used?

The impact assessment chapter is structured into three parts where the national, regional and local environmental goals work as a starting point in each section.

Kungälv

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

This plan and its impacts are very much shown from the 'bottom-up' perspective. The relations to other municipalities and in what way they are relevant are presented in a table to make it perspicuous. The national interests are also presented and taken into account in the plan.

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)

'The good society, preservation, Building-development, living environment, trade and industry, public service, culture, traffic, communications and availability, technical support, robustness, safety and "beredskapshänsyn"'.

Integration of the Environmental Assessment. In the overall plan structure, is it an integrated part or separate document or chapter?

The impact assessment is very much a part of the plan.

- o In the cases where the environmental assessment is integrated into the process, are the environmental conflicts identified or made visible?

Yes, it has been done in such a way that it makes the reader aware of what impacts each goal will lead to. The presentation is done to show conflicts between the development of roads, small towns and so on, and the social, economic and physical environmental.

Reporting

- o Communication of the results

A matrix shows the impacts of the 4 scenarios in relation to Agenda 21, health, and the economy in both long and short perspectives.

- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods have been used

The methods are relatively well presented, though the group responsible for the plan and the assessment is not mentioned by name, background, number etc.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had in the plan's final preparation work?)

This plan and the role that the assessment has had are well presented. There are even special reports compiled to describe the process.

- o Description of the main impacts and the connection of those to the planning proposals

This is clear, the conflicts are highlighted and it is possible to see the impacts of various decisions, which will make it possible for the public to make the politicians responsible for the consequences.

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods were used?

Apart from the scenarios, the 'Natura 2000' areas are commented on and described, and measures are summarized.

Coverage of specific issues

- o Alternatives – what sort of alternatives have been presented, is 0 alternative include?

Alternatives are presented in the 4 scenarios. No zero alternative is mentioned.

- o Sustainable development – has it been discussed and how?

The discussions of sustainable development are held through the agenda 21-arguments and are woven into the conflict-discussions.

- o The connection to the environmental goals – national, regional and local, how has these been used?

Yes, the environmental goals are taken into account but they have not been the starting point. It all starts with the 4 scenarios and then what impacts these will have according to both environmental and other goals. The process starts of with the issues relevant for the people and the prerequisites in Kungälv.

Karlstad

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

According to the foreword to the plan, it is collected decision making material that illustrates the general interest in the municipality. It is also an action programme that represents the municipalities' wishes with regard to the use of land and water and development in order to achieved the overall goal of good quality living environment.

The plan presents the following goals for the future development of Karlstad:

- 1) Promotion of a good living environment for people and other creatures as well as companies and organisations.*
- 2) Possibilities for work, education, living and recreation for different needs*
- 3) Development shall be based upon the principles of sustainable development*
- 4) Karlstad shall be a beautiful city that takes advantage of the natural preconditions.*

The plan presents visions and goals for the following areas:

Karlstad as a 'kretsloppssamhälle', Karlstad's urban structure, population and housing needs, Karlstad as a place to live, economy and employment, communication and transports, environment and nature, outdoor life and recreation, culture, education and tourism.

The plan is a follow-up of the development ideas presented in the ÖP 90 and studies some of the areas identified in the earlier plan with regard to the development of the town, the town's green structure, the development of other townships, development in the rural areas, communications and transport, technical infrastructure, nature protection, outdoor life, protection of cultural environment, risk and protection, water, waste etc.

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)*

The description of the impacts focuses predominantly on a general environmental impact assessment, although considerations have also been given to other impacts and factors. It is emphasised in the assessment chapter that the assessment includes both economic and social as well as environmental consequences. It is also highlighted in the plan that the economic and environmental aspects can overlap, e.g. the proposed development areas have as a starting point the fact that the existing development areas shall take account of the investments and developments already carried out, and that new investments with regard to infrastructure such as roads and technical infrastructure shall be needed for the

proposal as well as public transport needs. Furthermore, social impacts have been a consideration within the overall goals of increasing Karlstad's total supply of dwellings and employment areas. This includes a consideration of a mix of dwellings etc.

The environmental factors that are used for the assessment include the following: natural conditions, landscape/townscape, land use, cultural environment, recreation and outdoor activities, environmental conditions, technical and structural conditions, risk and ecosystem considerations.

Integration of the Environmental Assessment in the overall plan structure, is it an integrated part or separate document or chapter?

A separate chapter called 'Description of impacts' (Konsekvensbeskrivning) includes an assessment that is to meet the requirements of Chapter 4, Article 4 in the Planning and Building Legislation. The term Strategic Environmental Assessment is not applied as such.

The environmental impacts of the Karlstad ÖP are presented as a consequence of the planning proposals presented in the plan and follow the chapter on recommendations presented in the plan. In the chapter a general run-through of the environmental effects and other effects of the development of the areas that are proposed for development according to the plan is presented. According to the plan the aim of the coverage is to give an idea of the consequences that need to be studied in further detail in the forthcoming planning. Among the questions addressed for each area are, what the zero alternative entails, which preconditions are needed for potential future development, which conditions are necessary for sustainable solutions, and the positive as well as negative impacts of the developments proposed in the plan.

The coverage of the environmental effects are structured in the same way as the plan in general, i.e. it does not assess the effects of the overall proposals for developing the municipality as a whole, but is based upon individual proposals within the following development areas; housing, economic activities, traffic and other issues, including establishment of recreational areas, waste disposal stations and a cemetery. The developments are proposed within a particular location that is specified in the assessment.

For each of the development areas/sectors the following consequences are assessed,

- Zero alternative*
- Preconditions and effects of the development*
- Potential for sustainable development*

- *Positive effects*
- *Negative effects*
- *Evaluation*

<i>Proposals</i>	<i>Location</i>	<i>Type of development</i>	<i>0-alternative</i>	<i>Development required</i>	<i>Sustainable development</i>	<i>Positive effects</i>	<i>Negative effects</i>	<i>Evaluation</i>
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There is a direct reference to the overall visions and goals for the future development of Karlstad which are presented in a compatibility matrix, where the compatibility of the developments proposed and the overall goals of the plan are compared and weighed. These include the following goals: vicinity to services, alternative energy development, location in built-up areas, location in rural areas, public transport, closeness to nature, closeness to services, connection to other dwellings, connection to work places, reduction of the need to travel, use of existing infrastructure services etc.

- o In the cases where the environmental assessment is integrated in the process, are the environmental conflicts identified or made visible?
The assessment includes issues such as economic and political considerations and identifies potential conflicts. Examples of this include how the plan's goals are weighed, e.g. the consequences for public transport, places of work in connection to proposals for new housing areas. On the other hand is the evaluation itself not particularly thorough and the effects of each proposal are not compared or weighed with regard to each other or how they affect the plans' content.

Reporting

- o Communication of the results
The report of the results is given in the chapter entitled, "Description of impacts". The communication of the results has been presented in an overall description of the findings as well as in a table examining the different areas with respect to the environmental impacts.
- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods were used

There is no mention of who carried out the assessment or what methods were used.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had for the plan's final preparation work?)

It is not clear when in the process the Impact assessment took place, but it seems as though the assessment had been done before the actual decision on which of the two alternatives to choose was made.

- o Description of the main impacts and the connection of those to the planning proposals

The connection of the assessment carried out in the chapter on impacts assessment and the decision making process is made visible in the final column Assessment or 'Avvägning', where the political prioritisation is made visible. However, there is no mention of the impact assessment in other parts of the plan. The aim of the assessment chapter is identified the effects that need to further studies in the continued work. The chapter 'continued work' is placed after the assessment chapter and identifies areas that need to be studied in further detail in the continued planning work.

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods were used?

There is no mention of how the assessment was carried out, who was involved or to what extent the process was integrated in other planning processes.

Coverage of specific issues

- o Alternatives – What sorts of alternatives have been presented, is the zero alternative included?

For each of the planning areas addressed in the assessment chapter, there is coverage of the zero alternative as the only alternative (opposite) to the development proposals presented in the plan. However, the 0 alternative is only mentioned (1 word or line) in the table and not studied further with regard to the different impacts.

- o Sustainable development – has it been discussed and if so, how?

Sustainable development is one of six aspects that are included in the assessment, i.e.

'possibilities for sustainable development'. Included in such possibilities are solar energy, distance heating, re-using rain water, possibilities for cultivation, composting, culturing of animals, access to bio-fuel, walking and cycling paths etc.

Furthermore, sustainable development is among the overall goals of the municipal plan, which is regarded as 'an important tool to form a sustainable society'.

In the plan's foreword it is explicitly stated that new demands have emerged regarding the plan's contents, foremost with regard to sustainable development, environmentally friendly solutions and consideration of the eco-cycle. Among the four overall aims stated for the plan (in the foreword) is 'to form an important tool to form a sustainable society'.

In the overall goals for Karlstad, listed on page 7, it is stated that Karlstad's development shall be based on the overall principles for sustainable development.

Furthermore, an environmental declaration has been prepared for the municipality, that includes that the work for sustainable Karlstad must be based upon ecological, social and economic principles. Among the aspects highlighted are the importance of economic development and environmental considerations developing hand-in-hand, sustainable considerations in planning including an environmental assessment of the different solutions and consideration of different alternatives as well as an EIA, of comprehensive and detailed plans and other decisions that have significant effects on the use of land and water.

o The connection to the environmental goals – national, regional and local, how has those been used?

Due to the plan dating from 1997, the current national environmental goals were not in place. However it is stated in the plan's first chapter 'Visioner och mål' that Karlstad was involved in the consultation of the new environmental goals. Furthermore, Karlstad municipality has established its own environmental goals; included in the municipality's environmental controls programme and those are, according to the plan, in accordance with national goals, legislation and agreements. Among the goals included in the 'Kommunens naturvårdsprogram' considered to be of prime relevance for the physical planning are:

- Protection of biological diversity*
- Management of natural resources*
- Protection of natural and cultural landscape*
- Parks and green areas.*

Sigtuna

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

The plan is regarded to be a guiding document for long -term planning and forthcoming decisions in the municipality. Its role is to identify possible locations and illustrate how the structure of the municipality's physical development will look in future. An important aspect in this context is to evaluate the different interests (that are of importance outside the municipality). The results of the evaluation of the different interests are illustrated in the detail planning, area decision or building permissions that result in legally binding decisions.

It is highlighted that since the last ÖP (adopted in 1991), new ways of dealing with issues, as well as laws and regulations have been adopted with regard to physical planning. Among those changes that EU membership has entailed are the water directive, Natura 2000, as well as the issues of sustainable development. All of these have become more prominent, e.g. through the work on Local Agenda 21. Furthermore, national legislation has changed the preconditions for planning, such as the Swedish environmental legislation and the planning and building legislation and the national environmental goals.

According to the plan, the changes in the Planning and Building legislation (PBL) have resulted in the following changes in the new plan.

- *Increased support for sustainable development*
- *New emphasis on green structures and cultural values*
- *Water issues and planning*
- *Environmental and risk factors*
- *Demands to illustrate environmental, economic and social effects of the plan*

Relation to other levels

The plan is introduced in the existing framework of the regional plan with regard to the regional goals on population numbers and job opportunities

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)

It is stated in the foreword of the plan that the municipality sees the role of the municipal plan being enlarged and expanded with new emphasis on

environmental issues, including that environmental problems shall be prevented and careful management of land, water, energy and raw materials shall be promoted.

There are separate chapters on the natural and cultural environments in the municipality. Regarding the natural environment the agricultural character of the municipality is emphasised and that Sigtuna is an 'ecomunicipality' (ekokommun) which places specific demands on protecting the natural environment. Most of elements identified with regard to the natural environment are directed towards certain types of environments (e.g. odlingsmiljöer, ängs- och betesmark) as well as landscape elements that have a cultural value as well as certain areas. Furthermore, there is reference to the framework given by the national and regional environmental goals that have been translated to the municipal level in municipal environmental goals.

The chapter on cultural environment give a specific emphasis on the municipality's role in maintaining the cultural environment and the importance of the environment on the development of dwellings, economy and tourism.

Integration of the Environmental Assessment in the overall plan structure, is it an integrated part or separate document or chapter?

In Sigtuna's Översiktsplan the social, economic and environmental effects of the plan's proposals are assessed simultaneously, based on the principle of sustainable development, i.e. including the three aspects. It is furthermore explicitly stated that it is not considered feasible to assess the environmental impacts separately.

The findings of the assessment are included in a separate chapter, entitled assessment of ecological, economical and social effects. The consequences of these three aspects are assessed for the main proposed changes in Sigtuna municipality, i.e.:

- *Housing areas,*
- *Workplaces and activities in connection with Arlanda airport,*
- *Infrastructure and*
- *Municipal activities.*

In the impact assessment chapter, the effects of the proposals presented within four different sectors are assessed. This includes an assessment of the positive and negative effects of the proposals, from an environmental, economic and social point of view. The combination of these factors is summarised. However, no evaluation or values are included in the summary and there is no direct reference to the assessment in other parts of the planning document. Hence, the connection with the planning proposal

presented in the plan with regard to the impact assessment is largely unclear, i.e. the way that the presentation of impacts affected the final planning proposals and how the negative impacts, that result from the proposal, are dealt with, mitigation measures etc. However, some measures included in individual chapters (e.g. transport) address some of the negative effects identified in the impact assessment chapter (e.g. noise and disturbance from traffic) without the reference to the chapter. In this way, the impact assessment is integrated into the plan, although the connection to an impact assessment process (if there was one) is not made visible and the consideration of aspects taken up in the assessment chapter is not consequent, e.g. in the chapter on housing, none of the negative aspects identified in the impact chapter are addressed.

- o In the cases where the environmental assessment is integrated into the process, are the environmental conflicts identified or made visible?

N/A

Reporting

- o Communication of the results

In the chapter 'Planens huvuddrag' it is stated that among the changes introduced with the revised plan are the plans consequences 'belyses översiktligt vad gäller positiva och negativa effekter'. (This sums up the level of ambition for the environmental assessment and the reporting of the results in this particular case.)

The expectations of the impact assessment stated in the plan are to illustrate the consequences of substantial changes in land and water usage or with regard to the built environment, at an early stage. In the continued planning process, the impact assessment of changes (within the areas mentioned above) should be assessed step-by-step in the later stages.

It is furthermore explicitly stated that the understanding of the impact assessment requirements in the PBL that all three aspects shall be accounted for in the impact assessment, i.e. environmental, economic and social aspects. What is understood by each one of these are:

- *Ecological sustainability: environmental factors from a broad perspective*
- *Economic sustainability: including societal, municipal development as well as private economic interests.*
- *Social sustainability: encompasses time usage, security, accessibility to services, possibilities for interaction and integration.*

- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods were used

Nothing is said of the analysis nor of those who made it. There is reference to the fact that the assessment is considered to relate to the illustrated aims of the proposal and to the fact that a more in-depth assessment will be conducted as a part of the future planning and detailed plans.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had in the plan's final preparation work?)

There is no reference to the assessment in the planning proposals.

- o Description of the main impacts and the connection of those to the planning proposals

There is no reference to the assessment in the planning proposals.

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods were used?

No formal process was conducted as part of the assessment.

Coverage of specific issues

- o Alternatives – what sort of alternatives were presented, was the zero alternative included?

There is no reference of other alternatives. A vision for the development of the municipality to 2012 is presented, but only one alternative.

- o Sustainable development – has it been discussed and if so, how?

In order to achieve long-term sustainability it is thought necessary to consider environmental, social and economic aspects simultaneously. Among the principles that planning for Sustainable Development is based on are increased density, which is considered to have positive effects with regard to less land requirement, closeness to services, limited need to travel, effective public transport and reduced energy needs.

- o The connection to the environmental goals – national, regional and local, how have these been used?

There is reference to the national and regional environmental goals and how they provide a framework for the local environmental goals that were adopted in the municipality in May 2001. Sigtuna has its own Envi-

ronmental Policy. One of the articles in the policy states: 'Vid all planering och i alla kommunala beslut ska vi ta hänsyn till de hälso- och miljökonsekvenser som de ger upphov till'.

The impact assessment chapter is heavily criticised in an appendix to the plan written by a minority party present in Sigtuna's local council 'AKTION för Sigtuna Kommun'. Among the issues highlighted was that no real assessment was carried out of the different proposals in the assessment and an evaluation of the negative and positive effects of the proposals is also lacking. The lack of qualitative information is most heavily criticised, as is the connection to sustainable development, i.e. in which way the proposal contributes to the goals of SD.

Staffanstorp

The contents of the plan. This review concerned both the contents of the plan, as regards the hierarchy, strategic components and connection to other environmental protection measures

The focus of the plan is on the strategic level, entailing issues considered to be of structural importance for the development of the municipality. A more thorough study will be carried out for the urban areas (fördjupade översiktsplaner).

The municipal plan has strong reference to its location in the Malmö-Lund region that affects its function and provides opportunities with regards to educational opportunities as well as benefiting from a well-developed road and rail network with good commuting opportunities.

The plan is based on six visions for the future development by the municipality, i.e. good living environment, intimate and small-scale, good quality architecture and outer environment, cultural landscape as a resource, green structure and recreation, environmentally adapted communications.

The planning proposals are based on two main parts, i.e. development of urban and rural areas on the one hand, and proposals for sectoral development on the other.

The sectoral development includes the following: - housing and dwellings, - economic development and workplaces, - care and school, - commerce and services, - communications, - recreation and tourism, - natural environment, - cultural environment, - open areas, - water, -agriculture, - energy, - technical infrastructure, - environment and risks, - environmental goals, defence.

- o The aspects of the environment highlighted in the plan (to be studied with regard to environmental impacts)

No specific list of important issues with regard to the aspects of the environment received specific attention, though it is highlighted that the national environmental goals were a basis for the environmental considerations on which the plan was based upon.

Integration of the Environmental Assessment. In the overall plan structure, is it an integrated part or separate document or chapter?

The impact assessment is a separate chapter in the document.

- o In the cases where the environmental assessment is integrated in the process, are the environmental conflicts identified or made visible?

N/A

Reporting

- o Communication of the results

No clear methodology or presentation of the results in a systematic way. More of a general discussion of the preconditions for planning in the municipality – what the regional and national conditions provide for a framework and which general environmental impacts this could entail.

It is highlighted that the impact assessment of the comprehensive plan shall primarily address the comprehensive structural questions that are included in the municipal plan. The description of the impact has the goal of identifying strategic choices, pointing out conflicts in the stated goals and assessing the fulfilment of the plan's objectives. The Impact Assessment chapter follows the main structure of the plan, i.e. regional aspects, equality issues, urban and rural development and sectoral development. The urban and rural development is described on a general level and refers to a more detailed impact assessment in detailed plans, or in the case of transport, by the road or rail administration.

Certain conflicts are identified in the chapter, as well as where there will be a need for environmental assessment at a later stage. No evaluation or attempt to quantify the impacts was carried out at this stage.

- o Clarity in the reporting of the analysis, i.e. who carried out the analysis and what methods were used

No mention of who carried out the assessment or what methods were used was included.

Transparency. Visibility of the results of the assessment and the final planning proposals. (What role has the environmental assessment had in the plan's final preparation work?)

No reference to the assessment in the planning proposals, but under the sectoral proposals there is reference to the need to carry out an impact assessment at later stages.

- o Description of the main impacts and the connection of those to the planning proposals

Same as above

Procedural aspects. Certain aspects of the process were also considered, mainly with regard to the reference to the working procedure (integrated or not?), who carried out the analysis and what methods had been used?

See above

Coverage of specific issues

- o Alternatives – what sort of alternatives were presented, is the zero alternative included?

No alternatives presented – different visions, but those form a whole. No zero alternative.

- o Sustainable development – has it been discussed and if so, how?

The goal of sustainable development is an overall goal of planning in the municipality, supported by the EU's green book on the urban environment, Agenda 21, new environmental legislation, the changes in the Planning and building act, national environmental quality norms and environmental quality goals and environmental programme for the Skåne region.

- o The connection to the environmental goals – national, regional and local, how have these been used?

The national quality goals are being applied to the regional level. Stafantorp does not have its own quality goals but it has set up an environmental council that will develop environmental goals for the municipality, on the basis of the national and regional ones. There is some reference to the national quality goals in the plan, but it is highlighted that these are quite general.

The environmental goals are also addressed in the impact assessment chapter, including those that were considered to be of relevance for the

municipality, i.e. urban development, traffic, energy, industry, commerce, recreation, green structures and water.

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