INTRODUCING STRATEGIC ENVIRONMENTAL ASSESSMENT IN SERBIA WITH SPECIAL REFERENCE TO THE EUROPEAN UNION DIRECTIVE AND INFRASTRUCTURE CORRIDORS

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In July 2001, the European Union (EU) adopted the Directive 2001/42/EC of the European Parliament and the Council of 27 June 2001 on the Assessment of the Effects of Certain Plans and Programmes on the Environment, known as the Strategic Environmental Assessment (SEA) Directive. The EU countries will have three years, until July 2004, for the integration of the SEA Directive into national laws. The SEA Directive introduces procedural and technical requirements, according to which environmental assessment is compulsory for certain plans and programs but not for policies, except if they are a part of a plan, as well for plans and programs of national defence, civil emergencies, finance and budgets. According to the scope of the SEA Directive, environmental assessment is compulsory for plans and programs for infrastructure corridors – transport, telecommunication and energy systems.

In addition to the overview of the general framework for Strategic Environmental Assessment and the main requirements of the SEA Directive, the current situation in Serbia regarding the present condition of SEA is presented with special reference to the infrastructure corridors. One of the conclusions of this paper is that the main limitation for the implementation of SEA for plans and programs covering infrastructure corridors is the current legal situation. The main law which is supposed to introduce SEA has not been adopted yet, while the scope of the SEA within the new Planning and Construction Act includes SEA only for urban plans and does not cover, among others, plans for infrastructure corridors.

Key words*: strategic environmental assessment, environmental assessment, the SEA Directive, infrastructure corridors*

INTRODUCTION

Recent trends show that growth both in Strategic Environmental Assessment (SEA) literature and research projects can be seen as a consequence of the rapid development of SEA. As a planning instrument, SEA is the result of years of practice as well as the changes in understanding, evaluating and directing development. SEA is defined as " *the formalised, systematic and comprehensive process of evaluating the environmental effects of a policy, plan or programme and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making*" (Therivel et al, 1992). Providing the opportunity for a systematic overview of alternatives and for taking into account all components of the environment (including biophysical, economical and social), SEA offers an integrated and skilful approach in the process of decision making within the planning process. Taking into account the nature of the decisions - the complexity, diversity and multitude of interests – that also contributes to the increase in uncertainty, it is important to underscore exceptional flexibility as a very important characteristic of SEA, one that makes it possible for SEA to very easily adapt to different planning systems.

The main role of SEA is to reach decisions that adhere the recognised principles of sustainable development strategy, which means that these principles are incorporated into the process of planning and decision-making by using certain methods. Throughout the years, support for SEA development, improvement and consolidation was given within numerous legal frameworks, binding and non-binding guidelines, national strategies and other documents (see Table 1). All these documents show the importance of SEA, introducing a comprehensive evaluation of impacts on the environment into all types of decisions concerning future development and especially into those that are made at the level of policy, plan or program.

Table 1. Documents and other important events that contributed to the development of SEA

1969	The National Environmental Policy Act (NEPA) passed by the U.S. Congress, mandating all federal agencies and departments to consider and assess the environmental affects of proposals for legislation and other major projects.
1978	US Council for Environmental Quality (USCEQ) issues regulations for NEPA which apply to USAID and specific requirements for programmatic assessments
1989	The World Bank adopted an internal directive (O.D. 4.00) on EIA which allows for the preparation of sectoral and regional assessments
1990	The European Economic Community issues the first proposal for a Directive on the Environmental Assessment of Policies, Plans and Programmes
1991	The UNECE Convention on EIA in a Transboundary Context promotes the application of EA for policies, plans and programmes (adopted in Espoo, Finland)
1991	The OECD Development Assistance Committee adopted principles calling for specific arrangements for analysing and monitoring environmental impacts of programme assistance
1992	The UNPD introduces the environmental overview as a planning tool
1997	The European Commission issues a proposal for a Council Directive on the assessment of the effects of certain plans and programmes on the environment - the SEA Directive
1999	Australia Environmental Protection and Biodiversity Conservation Act introduces provisions enabling SEA of policies, plans and programmes Finland Act on Environmental Impacts Assessment Procedure applies to policy, plans and programmes
2000	Common position adopted by the Council with a view to adoption of an SEA Directive
2001	The European Union adopted the SEA Directive Decision to negotiate an SEA Protocol by the parties to the Espoo Convention for possible adoption at Fifth Ministerial Environment for Europe Conference (2003)
2003	The Economic Commission of UN adopt SEA Protocol

(sources: Partidario, 2000; Sadler, 2001)

FRAMEWORK FOR THE IMPLEMENTATION OF SEA

The development of SEA reached its progress not only due to the introduction of legal and other administrative acts, but also because the non–binding guidelines. The European Union (EU) has also invested a lot in SEA development, by initiating research projects on SEA application in the member states, by publishing special publications, organising seminars and, above all, by initiating and subsequently implementing the SEA Directive. The main characteristics of this instrument are "learning" and "designing" using experiences from practice because every plan, program and policy[1] have certain specifics.

The main aims of the SEA – to include the sustainable development principles in the PPP process and to attain sustainable development – have over the years been pursued in two ways. The first approach is called "Top-down", and it has been marked, according to the Brutland report, as one of the main institutional challenges in the 1990s. It entails the introduction of sustainable development by identification of the potential consequences to the environment of the PPP in accordance with the established standards, taking into consideration social and economic implications. The other approach, called "Bottom-up", "conquered" its place by taking into consideration the constraints and shortages of Environmental Impact Assessment (EIA). Not considering alternatives, the later phase of decision-making (that compromises the limited effects), and the inability of looking at cumulative impacts are only few of the shortages of the EIA on which the development of SEA has been established.

The simplest definition of SEA characterises this instrument as a process of environmental assessment that relates to PPP in such a way that main differences between these two instruments are in their scope and form. According to the EIA, which refers to the project level, the application of SEA has a wider scope of strategic decisions.

The fundamental concept of SEA (Figure 1) means that apart from developing the main aims for the PPP, another process of developing other perspectives (environmental and social) of a holistic character is carried out. Both processes at the same time take into consideration the initially defined aims of the PPP. Therefore, this fundamental concept should be applied to all methodological and procedural SEA arrangements related to particular circumstances, such as the state of the environment and PPP.

In addition to this fundamental concept, key principles of the instrument that stress sustainable assessment and integration of not just environmental but also socio-economic issues form a very important framework for the implementation of the SEA as a planning instrument. Applying these principles, as presented in Table 2, could help determine the actual value of SEA, since they have been designed in step-stages and formulated in terms of objectives that have to be fulfilled. Designed to develop and promote environmental issues in decision-making, they reflect the environmental and sustainable inputs of SEA in the process of decision-making.

In order to define the SEA model, supportive methodological approaches and methods, it is necessary to take into consideration knowledge obtained from practice as well as the main principles and the concept of SEA. Continual development, which has also been made by the implementation of SEA, is one of the main characteristics of this instrument. This steady progress in practice has broadened the scope of methodology and methods applied. However, numerous research projects and case study analyses show that existing methods cannot be used for all types of SEA (Kleinschmidt & Wagner, 1998). In practice, because of the very limited application of SEA, it is still unclear whether different models

[1] Hereafter referred to as "PPP".

implies the use of different SEA methodologies and methods, so that clear framework and recommendations have not yet appeared (Therivel, 1996). The methodological framework for conducting one SEA consists of (EC, 1994):

- The definition of the objectives of strategic action (identification of sectoral and environmental objectives for strategic action, identification of sectoral and environmental constraints for strategic action, identification of potential impacts witch might enhance or disrupt these objectives, selection of environmental issues that really matter in this stage of planning)
- The formulation of options for strategic action (analysis of certain actions in terms of their limitations and providing sector and environmental aims)
- Environmental impact analysis (assessment of the level and scope of fulfilling environmental aims for each of the subjects or fields defined)
- Information analysis (choosing the optimal option using the collected data)

In addition to these separated main frameworks of the SEA, the results of the implementation of SEA in practice should be noted. Table 3 shows what can be assumed under effective SEA, and what can be seen as one of the frames of reference in the process of formulating and defining the framework for methodological, legal and institutional implementation of SEA.

The SEA Directive

The legal and procedural framework for the SEA implementation is based upon the Directive 2001/42/EC of the European Parliament and the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (SEA Directive) that has been adopted on July 21st 2001. Based on the existing procedural elements of the European Commision Directive 85/337 on the "Assessment of the effects of certain public and private projects on the environment" and Council Directive 97/11/EC - the EIA Directive, the SEA Directive has been designed taking into consideration the limitation of the EIA Directive, as well as the results of recent SEA practice: inadequate environmental information, very limited public

Figure 1. Fundamental concept (Therivel & Brown, 1999)

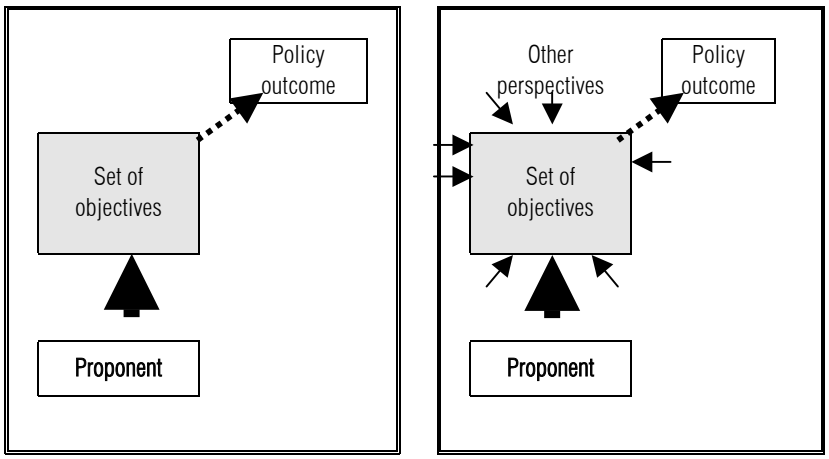

Table 2. Main principles of SEA (Verheen & Tonk, 2000)

1. An appropriate environmental assessment is carried out for all strategic decisions with potentially significant (positive or negative) environmental consequences by the agencies initiating these decisions.
2. The results of the assessment are available sufficiently early to be used effectively in the preparation of the strategic decision.
3. All relevant environmental information is provided - and all irrelevant information is excluded - to judge whether an initiative should go ahead or whether the objectives of the initiative could be achieved in a more environmentally friendly way.
4. Sufficient information on other factors, including socio-economic considerations, is available, either parallel to or integrated in the assessment.
5. The quality of process and information is safeguarded by an effective review mechanism.
6. Sufficient information is available on the views of the public affected by the strategic decision early enough to be used effectively in the preparation of the strategic decision.
7. The results of the assessment are identifiable, understandable and available to all parties affected by the decision.
8. It is clear to all parties affected by the decision how the assessment results were taken into account when coming to a decision.
9. Sufficient information on the actual impacts of implementing the decision is gained to judge whether the decision should be amended.

Table 3. The effective SEA (Sadler & Verheem, 1996; Therivel & Partidario, 1996; SEA, workshop report, Semmering, Austria, 1998; Sadler, 2001)

- SEA can be effective if those who are making the decisions have the knowledge of the importance of this instrument (in the other case SEA can be seen as an extra "paper work");
- to be effective it is important that SEA starts as soon as possible in the PPP process, actually before any decision is made;
- SEA could be effective if one consistent and systematic approach is preformed, where for the main elements should be considered: clear requirements, requirements for public participation and public reports, process which include guidelines for good practice, help and assistance (both public and private consultation), independent view and review of the implementation and carrying out the PPP.

consultation, and not using the results of SEA in the process of decision making (Feldman, 1998). Therefore, the aim of the SEA Directive is to define the legal framework in order to assure quality preparation of SEA. The EU member countries have had three years, until July 2004, for providing conditions for the implementation of SEA in national laws. Now, after three years of preparation, the EU is entering the period of implementation.

The SEA Directive promotes the "integrated model" (Therivel, 1996). The main aim of this model is to integrate SEA into each decision making phase during the planning process, inducing in this way changes in conceptual approaches of those who are making the decisions. The SEA Directive poses the requirements of including the public and sustainable topics in the planning and decision making process and producing the document on the environmental assessment called The Environmental Report with prescribed content (see Table 4), then publishing the results and taking them into consideration during decision making and monitoring. However, it should be noted that the contents of The Environmental Report do not include SEA aims, indicators and targets, which are the basis of the SEA process, and which are indispensable for assessment, choice of the most sustainable option, and monitoring.

The scope of the SEA Directive implies the requirement of producing SEA for certain plans and programs[2]. This includes plans and programs for transport, telecommunications and energy as part of infrastructure corridors.

The SEA Directive has 13 articles and 2 Annexes[3]. The introduction of the SEA Directive presents the reasons for supporting this document related to the EU policy regarding to the strategy of sustainable development and environmental protection[4]. Also, it states the necessity that "different environmental assessment systems operating within Member States should contain a set of common procedural requirements necessary to contribute to a high level of protection of the environment", as well as maintain trans-boundary consultation with the aim "to lay down a minimum environmental assessment framework, which would set out the broad principles of the environmental assessment system and leave the details to the Member States, having regard to the principle of subsidiary". The Member States' obligations are, among others, to regularly inform the commission about the measures undertaken regarding environmental quality. Regarding the results of the implementation of the SEA Directive, the commission has to submit the report 5 years after adoption, and then every 7 years.

The overview of the main procedural framework is presented in Table 5. It should be noted that this framework implicates that the environmental report should be integrated and included into legal procedures, defining main procedural steps: elaboration of an environmental statement by the authority preparing the plan, consultation, consideration of the results of the assessments before passing or submitting the plan or program, and providing the information on adopting the program.

Table 4. The content of the environmental report according to the SEA Directive (Annex I)

a) An outline of the contents, main objectives of the plan or program and relationship with other relevant plans and programs
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or program
c) The environmental characteristics of areas likely to be significantly affected
d) Any existing environmental problems which are relevant to the plan or program including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC
e) The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or program and the way those objectives and any environmental considerations have been taken into account during its preparation
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or program;
h) An outline of the reasons for selecting for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information
i) A description of the measures envisaged concerning monitoring in accordance with Article 10
j) A non-technical summary of the information provided under the above headings

[2] Under the SEA Directive environmental assessment is mandatory for plans and programs prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning, or land use, plans and programs requiring assessment under the Directive of Habitats (92/43/EEC), plans and programs which after screening are likely to have significant environmental effects, as well as for plans and programs for the small areas at the local level. It should be stated that SEA Directive allows discretion whether the assessment will be carried out.

[3] Annex I of the SEA Directive presents the compulsory content of the Environmental Report and Annex II contains the "Criteria for determining the likely significance of effects referred to in Article 3 (5)".

[4] The documents cited are The Fifth Environmental Action Programme: Towards Sustainability, The Convention on Biological Diversity and others.

Table 5. Main procedural framework according to the SEA Directive

a) Elaboration of an environmental statement by the authority preparing the plan or program; in this phase, according to the content of the environmental report (as set up in Annex I), the likely significant effects have to be identified, described, evaluated, and integrated into decision making; regarding the scoping procedures, the authorities have to be consulted in determining the level and scope of the information to be included in the report; important characteristic is that the SEA Directive is based on the existing procedural elements of the EIA Directive, which makes the integration not so complicated.
b) Consultation; the environmental report should be made available to the authorities and public which will have time to make their opinion whether the results should be of the significance for the competent authority in decision making process; if the plan or program will have trans-boundary impacts, the Member State should forward one copy to the affected country before the adoption stating the openness to enter into the process of consultation.
c) Consideration of the results of the assessment before the adoption or submission of the plan or program; in the process of decision making, appropriate consideration before the adoption will be given, besides the environmental report, to the consultation results as well as to the results of any trans-boundary consultation (Article 8 of the Directive).
d) Monitoring; SEA Directive establishes an extra-procedural requirement for monitoring "the significant environmental effects of the implementation of plans and programs…. to identify at an early stage unforeseen adverse effects… to be able to undertake appropriate remedial action."(Article 10).
d) Information on adoption; the SEA Directive requires to be created a statement of how the information have been taken into account during the process as well the measures regarding the monitoring.

THE CURRENT CONDITION OF SEA IN SERBIA WITH REFERENCE TO THE INFRASTRUCTURE CORRIDORS

The main law that is supposed to introduce SEA in Serbia is the Law on the System of Environmental Protection, which has been in the procedure for the adoption since 2002. This law will introduce SEA (Art. 16 and 17) and will make SEA compulsory for spatial and urban plans as well for plans and programs for infrastructure systems, transport, waterpower, engineering and energy (Art. 16).

The New Planning and Construction Act / Zakon o planiranju i izgradnji (2003)[5] takes SEA into consideration as a part of planning documentation according to the Regulations on Land Use, Plans Content and Preparation / Pravilnik o sadržini, načinu izrade, načinu vršenja stručne kontrole urbanističkog plana, kao i uslovima i načinu stavljanja plana na javni uvid (2004)[6]. According to Article 2 of the Regulations for Urban Plans, SEA is compulsory for general plans, according to the content of regulation arrangements where "strategic environmental assessment of planning solutions to the environment for the legally defined purposes and objects" has to be performed. SEA is also compulsory for the plan of general regulation, where, according to Article 8, "assessment of strategic impacts on the environment for planning solutions defined by Law is performed if the plan of general regulation is made for settlements not included in the general plan". However, regarding spatial plans, the Act does not mandate SEA. Spatial plans for areas of special purposes and Article 19 of the Regulations on Spatial Plans' Content and Preparation / Pravilnik o sadrzini i izradi planskih dokumenata (2003)[7], do entail carrying out plans for infrastructure corridors or networks of international corridors, highways and regional infrastructures (transport, energy, telecommunications and waterpower engineering), that include only the "assessment of economic justification and social acceptance of the planning activities, objects and function of the special purposes".

Therefore, it should be noted that in the current planning practice in Serbia, the legal frames for implementing SEA are uncoordinated, and thus there also aren't any guidelines or similar documents, as well as recommendations for carrying out SEA issued by competent authorities. Also, it is very important to state, respecting the main methodological framework of this instrument, that there are no published case studies and that an analysis of the published papers shows that SEA is found in literature usually as a presentation of the current state of SEA in the EU and worldwide (Crnčević, 2003).

Existing experience within the EU regarding the implementation of this instrument for the infrastructure corridors, usually for the transport sector, is very limited. The countries with some experience are Austria, Denmark, Finland, France, Germany, Netherlands, Portugal, Sweden, and United Kingdom (Fisher, 2002). The results of the implementation of SEA in the area of infrastructure corridors (EC, 2000) show the benefits of applying this instrument, such as: better understanding of strategic environmental impacts, ensuring coherence between plans for infrastructure corridors and environmental / sustainability objectives, increasing public awareness of strategic planning and its understanding of the issues, exclusion of some adverse projects at the SEA stage, and providing an initial knowledge base on the potential environmental impacts to be addressed in subsequent Environmental Impact Assessment (EIA). On the other hand, taking into consideration the defined limitations (sources: EC, 2000 & Partidario, 1996) in the process of introducing SEA into systems of environmental management and planning – missing the expertise, communications, not developed methodologies and methods, limited public participation – it is possible to use these limitations as guidelines for further defining and providing conditions for SEA implementation.

It should be stated that Serbia and Montenegro are not obliged to implement the SEA

[5] Zakon o planiranju i izgradnji (Sluzbeni glasnik Republike Srbije broj 47/2003); Hereafter referred to as Act

[6] Pravilnik o sadrzini, nacinu izrade, nacinu vrsenja strucne kontrole urbanistickog plana, kao i uslovima inacinu stavljanja plana na javni uvid (Sluzbeni glasnik republike Srbije broj 12/2004); Hereafter referred as Regulations for Urban Plans

[7] Pravilnik o sadrzini i izradi planskih dokumenata (Sluzbeni glasnik Republike Srbije broj 60/2003); Hereafter referred to as Regulations for Spatial Plans

Directive, since they are not Member states, but however, defining SEA framework within the requirements of the SEA Directive is advisable, taking into consideration the perspective of joining the EU. In order to introduce the procedural and other requirements of the SEA Directive, the following steps should be taken:

- The analysis of the current status of legal procedures for SEA within the planning system and environmental management that should result in an insight into the status of SEA in the planning system;
- Defining the needs, constraints and potentials of the current system according to the requirement of the SEA Directive that should show in which areas adjustments are necessary;
- Defining the procedural and methodological framework for introducing SEA into the system of environmental management that would show the place and the role for SEA of infrastructure corridors;
- Defining the SEA scope for the infrastructure corridors;
- Introducing and passing all legal documents necessary for SEA implementation in the system of environmental management and planning in Serbia;
- Starting with the implementation of SEA as soon as possible using the methodological and procedural framework as set up in the SEA Directive;
- Working on guidelines and other documents as a necessary tools in the process of SEA
- Educating professionals and others involved in the process of environmental management, planning and SEA;
- Performing institutional adjustments in order to facilitate SEA implementation, control and monitoring.

CONCLUSIONS

The current state of SEA in the planning system for infrastructure corridors in Serbia implies that the main limitation for the implementation is the current legal situation as it is found that is not in accordance: the main law which is supposed to introduce SEA is not adopted yet, while the scope of SEA within the new Act mandates SEA only for urban plans and not covering, among others, plans for infrastructure corridors. Also, another limitation is found within the defining the scope of the infrastructure systems within the planning system as the Law on the System of Environmental Protection, which is in the procedure of adoption does consider SEA for "infrastructure systems, transport, waterpower engineering and energy (Art. 16)" while the Act covers infrastructure corridors in plans for transport, energy, telecommunications and waterpower engineering (Article 19 of the Regulations for Spatial Plans). Therefore, taking into consideration current situation, it is necessary to pass the main law which is supposed to introduce SEA and which has to be in accordance with the scope of SEA Directive and its methodological and procedural framework, and then to start making the adjustments within other laws, such as the Planning and Construction Act. Also, it is necessary to define the scope of SEA within the infrastructure systems as well as the terminology. In this way, necessary conditions for starting the implementation of SEA, as well as other requirements of the SEA Directive would be fulfilled in the system of environmental management and planning in Serbia.

REFERENCES

Crnčević, T., 2003. *Starteška analiza u procesu planiranja infrastrukturnih koridora* in O prioritetima prostornog razvoja Srbije, Predhodna saopštenja, Geografski fakultet Univerziteta u Beogradu, Beograd

Directive 2001/42/EC of the European Parliament and the Council of 27 June 2001 on the Assessment of the Effects of Certain Plans and Programmes on the Environment

Feldman, L. 1998., The European Commission's Proposal for Strategic Environmental Assessment Directive: Expanding the Scope of the Environmental Impact Arssessment in Europe in the Environmental Impact Assessment Review 18, p.3-14

Fisher, B.T., 2002., *Strategic Environmental Assessment in Transport and Land Use Planning*; Earthscan Publications

European Communities, 1994., *SEA Existing Methodology; http://europa.eu.int/comm/ environment/ eia/sea-suport.htm*

European Commission, 2000., Strategic Environmental Assessment in the Transport Sector: An Overview of Legislation and Practice in EU Member States

Kleinschmidt, V., Wagner, D. (ed.), 1998., *Strategic Environmental Assessment in Europe, Fourth European Workshop on Environmental Impact Assessment*; Kluwer Academic Publishers

Sadler, S., 2001., *A Framework Approach to Strategic Environmental Assessment: Aims, Principles and Elements of Good Practice* in Proceedings of International Workshop on Public Participation and Health Aspects in Strategic Environmental Assessment; The Regional Environmental Center for Central and Eastern Europe

SEA Workshop Report, Semmering, Austria, 1998.; *http://europa.eu.int/comm/ environment/eia/sea-suport.htm*

Sadler, B. & Verheem, R., 1996., *53 Status, Challenges and Future Directions*; Ministry of Housing, Spatial Planning and the Environment

Therivel, R., Brown, L., 1999., *Methods of Strategic Environmental Assessment* in Petts,J.,(ed.), Handbook of Environmental Impact Assessment, Vol.1.,pp441-464

Therivel, R., E. Wilson, S. Thompson, D. Heaney & D. Pritchard , 1992. *Strategic Environmental Assessment*, Earthscan, London

Therivel, R., Partidario, M., R., 1996. *The Practice of Strategic Environmental Assessment*, Earthscan Publications Ltd, London

Therivel, R., 1996. , *SEA Methodology in Practice* in Therivel, R., Partidario, M., R., The Practice of Strategic Environmental Assessment, Earthscan Publications Ltd, London, p.30-44

Partidario, M.R., 2000., *Elements of a SEA Framework - Improving the Added-value of SEA* u Environmental Impact Assessment Review 20, 647-663

Verheem, R. and J. Tonk , 2000., "*Strategic Environmental Assessment: One Concept, Multiple Forms*", Impact Assessment and Project Appraisal 18(3), pp. 177-182.