STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) AND A PROTOTYPE APPROACH FOR THE INTEGRATION OF SEA WITH STRATEGIC LEVEL PLANNING IN TURKEY

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ABSTRACT

STRATEGIC ENVIRONMENTAL ASSESSMENT AND A PROTOTYPE APPROACH FOR THE INTEGRATION OF SEA WITH STRATEGIC LEVEL PLANNING IN TURKEY

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This study attempts to emphasize on the need for Strategic Environmental Assessment (SEA) implementations for Turkey, particularly for strategic level planning activities. 1/25.000 scaled Territorial Plans are subject to be strategic level plans in Turkey since there are no regional plans developed in Turkey. Although these plans should carry the role of strategic decisions for the sector development of regions, they do not provide sufficient output for development for many reasons today.

The aim of this thesis is to evaluate the role of Strategic Environmental Assessment in integrating environment into strategic decision making -particularly for 1/25.000 territories plans- and propose a prototype SEA approach for Turkey.

An integrated structure of SEA and planning activities might provide healthier implementations for Territory plans and SEA might be used as an enhancement toll for our current planning system with its transparent, participatory, coordinating and auditing nature.

KEYWORDS: Strategic Environmental Assessment, Territorial Plans, Strategic level decisions.

ÖZ

STRATEJİK ÇEVRESEL DEĞERLENDİRME VE TÜRKİYE İÇİN STRATEJİK PLANLANLARLA ENTEGRASYONU PROTOTİP YAKLAŞIMI

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Bu tez, Türkiye için özellikle stratejik seviyedeki planlama çalışmaları üzerinde Stratejik Çevresel Değerlendirme (SÇD) uygulamalarının gerçekleştirilmesinin gerekliliği üzerine yoğunlaşmaktadır. Ülkemizde Bölge planları yapılmaması nedeniyle 1/25.000 ölçekli Çevre Düzeni Planları stratejik seviyede planlamanın yapıldığı alandır. Çevre Düzeni Planları, diğer sektörler ve çevre üzerinde stratejik kararların verildiği planlar olması gerektiği halde, bir çok nedenden dolayı sosyal ve ekonomik gelişme için gereken yeterli çıktıyı sağlayamamaktadırlar.

Bu tez, SÇD'nin için stratejik seviyedeki karar verme araçlarına –özel olarak 1/25.000 planlara- entegrasyonu üzerine rolünü değerlendirmeyi ve Türkiye için prototip bir SÇD yaklaşımı getirmeyi amaçlamaktadır.

SÇD'nin planlama süreciyle eşgüdümlü yürümesinin daha sağlıklı planlama uygulamalarını sağlayacağına inanılmaktadır. SÇD, şeffaf, katılımcı ve koordinasyonu sağlayıcı yapısı ile mevcut planlama sistemimizi güçlendirecek bir araç olarak kullanılabilir.

ANAHTAR KELİMELER: Stratejik Çevresel Değerlendirme, Çevre Düzeni Planları, Stratejik seviyedeki kararlar.

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INTRODUCTION

1.1. Context

Strategic Environmental Assessment (SEA) is used to assess the possible negative impacts of strategic level decisions -policies, plans and programmes- and offers a promising approach to achieve the goal of sustainable development. Recognition of the importance of SEA is confirmed by the call for its implementation at both the international levels. Integrating the environment into strategic decision-making is an essential pre-requisite for moving towards sustainable development.

The first environmental management tool designed to solve environmental problems is “environmental impact assessment (EIA)”. EIA is a mainly quantified and mainly local assessment tool that is applied to the projects. It is very valuable to mitigate the effects of projects by using technical solutions but also inadequate, since EIA is integrated at the last stage of the planning process, how to build and place the activities.

The practice of environmental assessment for development projects -known as Environmental Impact Assessment- with significant effects on the environment is now well established in the European Community, Turkey and elsewhere in the world. Project based EIA, however, may take place too late in the planning process to avoid the significant environmental damage, and cannot

take account of the cumulative impacts of many individual projects. “It is therefore now widely accepted that the policies, plans and programmes that subsequently give rise to projects should themselves be the subject of what has come to be known as Strategic Environmental Assessment” (Wilkinson, Mullard, Fergusson, 1994).

The works progressed in the scope of “Environmental Impact Assessment Convention in Trans-boundary Context”, which is opened to signature in 1991, had been found insufficient for environmental protection and pollution prevention and therefore new and more effective tools had been searched. Encouragement for the implications of strategic environmental assessment has come from the agenda 21 follow-up to the 1992 United Nations Conference on Environment and Development (UNCED). The United Nations prepared the “Draft Strategic Environmental Assessment Protocol” and opened it to opinions of the Parties on 26-27 February 2001 in Sofia. This Protocol is opened to the signature of the parties on May 2003 in Kiev. Whereas Turkey is not a Party of this Protocol, it is following those works as an observer country.

Similarly, within the European Community, the Fifth Action Programme “Towards Sustainability” highlights the importance of SEA. Because of Directive 2001/42/EC, this is now a legislative procedure to be applied to the assessment of the environmental effects of plans and programs, which are likely to have significant effects on environment.

Although Turkey is not a Party to the United Nations SEA Protocol, it is one of the accession countries to European Union (EU). Therefore, the national adoption program of Turkey to EU had been prepared and submitted to the EU Council. SEA is also one of the major subjects of the adoption process of Turkey to EU.

Today, many countries as Canada, the United States of America, New Zealand, Netherlands, Australia, France, the United Kingdom and Finland have implementations on SEA but only the United States, Netherlands and Canada have legislative basis for their implementations. The EU member countries will adopt and implement SEA Directive by the year 2004.

The situation in developing countries is not very similar with developed countries. SEA is still a big dilemma for almost every developing country. None of these developing countries has a legislative structure related to SEA but only some countries as Lebanon and Turkey have draft SEA Regulations and some countries like Iran, Tunisia is willing to execute SEA projects.

There is not a unique approach to strategic environmental assessment. There are only principles, which are widely accepted. In reviewing the work undertaken by the United Nations (UN) and the European Commission, independent experts and Non Governmental Organisations (NGO's) can discern at least four broad approaches to SEA: full SEA, environmental appraisal, policy appraisal and incremental SEA.

The methodology for SEA is closely related to that for EIA. SEA and EIA share the same objectives and contain similar stages and tasks. Full SEA can be described as 'the formalised, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme and its alternatives, including the preparation of a written report on the findings of the evaluation, and using the findings in publicly-accountable decision-making" (Therivel, Wilson, Thompson, Heaney, Pritchard, , 1992)

"An environmental appraisal generally differs from a full SEA in that it is less formalised and systematic, may consider a restricted range of effects may nor require the production of a written report and may involve restricted

public/agency consultation, or none at all" (Wilkinson, Mullard, Fergusson; 1994).

Policy appraisal focuses on the costs and benefits of government's actions. The possible effects of the policy on economy, social structure and environment are considered. Environmental goods and their costs, which do not enter the market, are given value and assessed by cost-benefit analysis. However, this approach does not require a public participation or a written report of the evaluation.

The integration of environment and its influence on the decision-making remains as a question since the decisions are not reviewed by an authority or are not publicly accountable in last two SEA approaches. However, it must also be stated that both approaches are related with the "policy level" decisions and full SEA is widely used for the plans and programmes. For instance, approach of EU SEA Directive might also be called as "full SEA approach".

Incremental SEA is the modest development of EIA, considering the assessment in a wider context and taking account more projects. This approach is a down to top approach. Long-term effects of "urban development projects" such as highways, dams, channels and pipelines are considered in a wider context rather than merely immediate land-use issues.

Every SEA approach has some advantages and disadvantages. Environmental appraisal and policy appraisal are generally applied in policy-making level. The level of details used for the assessment is very low and the consequences of the development actions are still in question because of the fact that no review has been made by the environment authorities and public. Incremental SEA is very useful for the assessment of urban development projects

but also inadequate to assess the chain reaction created on other sectors. Furthermore, incremental SEA is still very detailed and quantitative.

Finally, the scope of assessment and the level of participation are more satisfactory in full SEA. In addition, full SEA provides a careful balance between science and art; "…not everything of relevance can be detected, measured or assessed with objective scientific methods. Environmental assessment should begin with a consideration of the facts, but it ultimately boils down to the identification, interpretation and understanding of subjective human values, for which there is no exact science and, indeed, no precise art" (Federal Environmental Assessment Review Office, 1993). Full SEA should ensure both the integration of assessment with scientific methods and the expert judgment.

1.2. Aim

Turkey has already prepared a Draft SEA Regulation and still searching the best way of implementation. Plans are programs are in the scope of SEA and Turkish draft SEA regulation. It will be obligatory for several plans and programmes to be integrated with SEA procedure just after the enforcement of the regulation. SEA process will affect Turkish planning system and enhance it if possible.

This integration requires finding the suitable model for the Turkish planning process, defining the scope of public participation and promoting contribution and collaboration of the competent authorities to the process.

What is the best way of facilitating democratic process, integration of environmental concerns into the planning process and convincing the competent authorities to apply SEA without direct legal pressures? Should the ideas and

conditions of public and environmental authorities be obligatory for the competent authorities?

Which SEA approach is more suitable for Turkish planning system and how can SEA strengthen this process? Which approach may lead us to a more effective implementation and provide a strong participation and collaboration of the competent authorities to the process?

The aim of this research is to look for the answers of the questions above, to evaluate the role of Strategic Environmental Assessment in integrating environment into strategic decision making -plans and programmes- and propose a prototype SEA approach for Turkey.

1.3. Method

The role of SEA in integrating with the decision-making will be provided over the "Territorial Plans", which are prepared in 1/25.000 scale. These plans are strategic decisions for the sector development of regions. In addition to their deterministic structure on the land use, they also provide scenarios for the economic and social development.

The methodology used in this thesis is the evaluation of two SEA case studies of Turkey. Both case studies are focused on the 1/25.000 scaled Territorial Plans (Çanakkale Territorial Plan, Oymapınar Region Tourism Development Plan).

The integration model of SEA process that, I used in Çanakkale territory plan was a result of the discussions with foreign SEA experts. I have examined a wide range of literature sources on the case studies of individual countries and

international organisations. These included documents and official publications from government bodies, academic literature, and internet sources.

In order to maintain a level of consistency in the questions asked and the analysis undertaken, simple evaluative criteria that we developed and agreed among the project partners. The key indicators I have used in this thesis to analyse the success of Çanakkale Pilot study is communication, co-ordination, guidance/training and awareness rising aspects. The "key successful indicators" are taken from "SEA and Integration of the Environment into Strategic Decision - Making Final Report". The methods I used to integrate SEA process into Çanakkale territory plan are included in the Handbook on Environmental Assessment of Regional Development Plans and EU Structural Funds Programmes and the environment integration methods provided by the REC experts.

The second case study -Adoption and Implementation of SEA Directive in Turkey- was different from the first one with its scope and approach. EU SEA Directive and its guidelines and Integration of the Environment into Strategic Decision-Making (European Commission, Executive Summary) document were the main sources I have gathered the key success factors for the Draft SEA Regulation and the pilot project.

Institutions, ministries and NGOs which represent the eleven sector indicated in the EU SEA Directive were consulted during the preparation of the annexes of the draft SEA regulation. I evaluated the conclusions of the consultation meetings, held for the main text of the regulation. I used the conclusions of the meetings and group works to evaluate the success of the regulation.

Implementation of draft regulation is the concern of the project. Ministry of Culture and Tourism is the partner of the pilot project since this ministry is the executer of "Oymapınar Region Territory Plan". Pilot project is still being carried out. Therefore, it is not possible to evaluate the outputs of the pilot project in this study.

The criteria that I used to analyse the performance of the case study are the coordination of the partners of the project, the initial reactions gathered for the draft regulation, the level and scope of implementation and expert judgements on the SEA approach of Turkey.

1.4. Content

The remaining of the study is divided into five major parts. The first one describes the basic principles of SEA. The second one gives us the existing studies and approaches on SEA. The third one includes the first case study of Turkey, fourth one focuses on finding the suitable SEA approach for Turkey with using the current planning systems evaluation. This order is chosen to give a better understanding of the prototype SEA approach. SEA is not a very well known and experienced tool in Turkey. Therefore, the basic principles and approaches will be useful to understand current conditions for SEA implementations. Two case studies indicate the basic knowledge and experience of Turkey on SEA and are followed by the Turkish draft SEA regulation.

The basic principles of SEA are screening –whether a plan or program is a subject of SEA or not- , scoping -design of SEA process and data collection- , public participation -local participation to SEA process- , SEA report -documentation of the process- , reviewing -quality control of SEA process- , decision making -final decision on plans or programs- ,and monitoring -to

monitor the possible effects- . The basic principles will be presented to give a better understanding of SEA.

The origin of the SEA methodology, the idea that lies behind it and existing studies on SEA on all over the world will be presented in this research. To create a good basis for Turkish approach, the examples of how European Union members and other countries integrate SEA with their decision-making system and what kind of tools they use for effective implementation will be briefly described.

Çanakkale SEA pilot project is the first SEA experience of Turkey. The case study will provide us an opportunity to observe the first impressions of the project team and the integration of SEA with the territory plans. The case study will lead us to observe the public participation and coordination created between institutions, the use of local knowledge, the importance of the suitable data and alternative plans during the process.

"Adoption and Implementation of SEA Directive in Turkey" Project is the second practice of Turkey on SEA. Its origin is an existence of a need for the integration of SEA process within the Turkish planning system. A Draft SEA Regulation has already been prepared and the discussion over the version is going on. The Draft Regulation describes a prototype SEA approach for Turkey.

Finally, the questions of "how SEA can be integrated with Turkish planning process" and "what could SEA do to strengthen this process" will be discussed.

CHAPTER 2

PRINCIPLES OF SEA

A well designed SEA process needs a referred policy, use of simple and elastic techniques, integrated interdisciplinary look, defined aims, criteria and quality standards, accessible information for the public, participation of public and concerned stakeholders, given ability to novelty concerning the decision making mechanism.

SEA is an integrated process. Environmental assessment process and planning process operates at the same time. SEA should be applied, at the earliest stage of the plans and programs that may have environmental consequences. Planners should preferably start a dialogue with environmental experts as soon as it is decided that a new plans and programs (or major change of an existing plan) is to be prepared.

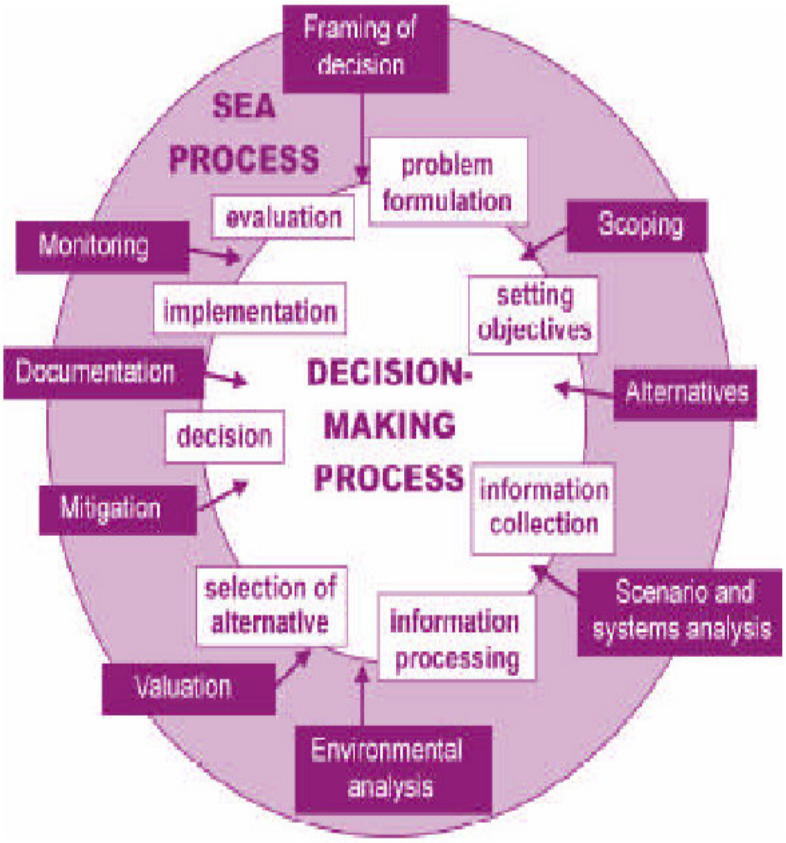
The competent authority is responsible for the preparation of a SEA report for their plans and programs and it should seek collaboration with the environmental authorities. The planning authority is best positioned to reduce impacts while achieving the plan objectives. He should collaborate with environmental authorities, who are aware of environmental objectives and sensitivities.

The SEA report should be reviewed by environmental and other interested parties and by the public. The review should establish that the SEA report describes the impacts of the proposed plan, as well as possible alternatives and the reasons for their rejection.

The SEA report should be presented to the decision makers at the same time as (or as part of) the proposed plans and programs. The competent authority should consider the SEA report in decision- it should make explicit reference to the SEA report, justifying its decision. When the competent authority makes its decision about proposed plans and programs is unable to adopt some of the SEA report recommendations.

SEAs should involve both technical forecasting activity and frequent consultation (both as a formal step in the procedure and informally) of environmental authorities, other agencies and interested groups. The public should participate in the SEA process. Interested and affected groups should be aware of the steps involved in an SEA process and of the opportunities for participation available. The results of the SEA process should be understandable to these groups.

Table 1: A View of SEA Process and Decision-making (Stockholm Environment Institute, 2001)



2.1. Screening

"An appropriate environmental assessment is carried out for all strategic decisions with potentially significant (positive or negative) environmental consequences by the agencies initialling these decisions" (Verheem, Tonk, 2000). At this stage we define the type and level of the environmental assessment; whether a SEA is necessary. If a SEA is not to be required the

planning authority should prove that the plan or program does not have a major negative impact on the environment.

Since SEAs should start at the earliest stage of the planning process, the competent and environment authorities should be notified as early as possible. If no mandatory SEA procedure exists, screening can also be used to agree about the SEA procedure. To enhance transparency, this should be agreed with, or communicated to, the parties involved, including the public.

2.2. Scoping

An initial stage in the SEA where possible impacts are listed. These are then analysed to see which need further study and at what level (European Commission, 1998). At this stage framework of the study is described. The data that should be collected, environmental objectives and indicators to be accounted for in the SEA; environmental impacts to be considered; alternatives to be elaborated and assessed; links with the scope of assessments at other tiers; the approach to the assessment, justification for leaving any issues out of the SEA that were proposed during the scoping process (for example, in public hearings).

The general benefits of an early scoping phase are:

-It helps ensure that the environmental information used for decision-making provides a comprehensive picture of all the effects of the project, including issues that are of particular concern to affected groups and other interested parties.

-It helps ensure that attention is focused on the issues that are of most importance for decision-making, avoiding the collection and presentation of unnecessary information and the unproductive use of resources.

-It can help in effective management and resource of the SEA by encouraging early planning of the activities required to produce the environmental information.

-It can encourage the planning authority and others to consider possible alternatives and measures that might reduce the impact of the project (European Commission, 1999).

Because scoping involves consultation with outside bodies, it can provide a useful method of establishing contact with other agencies and authorities, interest groups, local communities and the public. By involving these groups, scoping can increase the acceptability and credibility of the SEA and the decision-making process and reduce the risk of opposition emerging late in the day, causing delay and costs.

2.2.1. Activities involved in scoping:

The scoping exercise should:

-determine the area of search,
-identify which data are available,
-identify the surveys, which would be required to fill data gaps and the cost-effectiveness of these.

The scoping stage of the SEA process may involve the following activities:

-describing the type of plan the planning authority envisages and its objectives;
-consulting external parties, including the public, on the issues to be assessed;
-publishing a decision about the scope of the SEA, and selecting indicators (if possible with target values) that serve as evaluation criteria for the plan or program.

2.2.2. Defining environmental objectives, indicators and targets

After collecting environmental baseline data for the plan or program, defining environmental objectives, indicators and targets are necessary. An objective is an expression of the desirable state or development of an impact (for example, the greenhouse effect should be prevented); an indicator is a measurable quantity, representing objectives (for example, the emission of greenhouse gases); a target is the value that an indicator should ideally take (for example, a reduction of emissions of carbon dioxide by 20%).

Defined objectives, indicators and targets according to the characteristic of the plan or program, will ensure to evaluate the effectiveness of environmental considerations that had been taken into account for the plan or program.

2.3. Impact Assessment and SEA Report

2.3.1. Impact Assessment

An Impact is the consequence that any given activity within a particular plan or program may be expected to have on the environment (European Commission, 1999). Impacts may include descriptions of potential resource depletion/waste, climate change, acidification, local air pollution, photochemical smog, impact on biodiversity, visual and other impacts on landscape, noise, land

take/proximity, impacts on water, and accidents. Direct, indirect, secondary, cumulative and synergistic impacts should be considered.

Impact prediction involves determining the type and magnitude of impacts that the plans or programs is likely to have on the baseline environment. The range of impacts determined by a plan or program will normally be much wider ranging than the projects. The impacts of plan or program can be:

-large or small, affecting an international, national, regional or local area; positive or negative;
-short-term or long-term, reversible or irreversible;
-direct or indirect;
-cumulative;
-induced/generated by the plan or program;
-likely or unlikely to occur;
-easy or difficult to mitigate

Impact predictions should be clearly linked to the key issues identified during the scoping stage and should relate with the environmental conditions of the affected area. The level of details to be assessed in which a plan or program to be assessed are lower than a project. In many cases only a very few indication of the type and level of future impacts will be needed.

The assessments of the impacts is realised by some kind of methods in the SEA. The most common ones are "check lists" or "environmental matrixes". While evaluating the impacts Geographical Information Systems, other quantitative methods may be used too but these are both expensive and time costly methods. "Check lists" or "environmental matrixes" are easily applied and cheap methods. Some important general forecasting methods, which can be used in combination, are:

‘Recent international state of the art reviews on SEA conclude that a wide variety of prediction and evaluation techniques are available for SEA. Techniques can generally be ascribed to the following categories” (Sadler, Verhem, 1996):

- Those already used in project level EIA, adopted for use at a more strategic level of assessment (matrices, checklists, environmental models)

- Those already used in policy analysis and planning studies, which can be adopted for use in SEA; various forms of scenario and simulation analysis, regional forecasting and input-output techniques, site selection and land suitability analysis, geographical information systems (GIS), systems modelling (e.g. traffic networks, policy and programme evaluation techniques (multi-criteria analysis, goals achievement analysis, cost benefit analysis, sensitivity analysis, …..),

- New assessment methods and tolls that are currently being developed to address specific issues of SEA; e.g. methods for life cycle analysis (LCA) and for cumulative impact assessment.

- Literature search, expert judgement (Delphi Survey, Workshops, Interviews)

2.3.2. SEA Report

The Environmental Report is a key output of the SEA process, and should describe the whole process and its results. Coming to this phase, initially

the question of why do I need a SEA is answered in screening phase, what will I do question is answered in scoping phase by preparing a framework for the future study and where will I develop question will be answered at this stage. This means the planning alternatives should be ready at this stage and with their assessment by the environment criteria.

A SEA Report should involve,

- Non-technical summary of the Environmental Report (the report on baseline information-scoping report)
- What DIFFERENCE has the SEA process made?
- Who carried out the SEA, when, who was consulted, etc
- Purpose of the SEA
- Plan objectives
- Links to other plans, programs and objectives
- Links to environmental/sustainability visions and problems
- Links to other plans and programs
- Baseline environmental/sustainability data
- Difficulties in collecting data, limitations of the data etc
- Significant environmental/sustainability effects of the preferred options; proposed mitigation measures
- How environmental/sustainability visions and problems were considered in choosing the preferred options
- Other options considered, and why these were rejected
- Significant environmental/sustainability effects of the policies and proposals; proposed mitigation measures
- How environmental/sustainability visions and problems were considered in developing the policies and proposals
- Links to project environmental impact assessment, design guidance etc.

• Proposed monitoring

By considering all the items listed above, the competent authority is now ready to consult to the related parties and environment authority on the quality of its report and assessment.

2.4. Review

The review of SEA reports provides an invaluable check on their quality, especially where such checks have not been applied earlier in the SEA process. It is at the review stage that the environmental authorities, other bodies with environmental responsibilities and expertise, and the public, are able to comment on the SEA report and the action it describes.

The existence of SEA report review should ensure that, at the very least, the following questions are fully answered:

-Does the SEA report address the issues raised in the scoping report?
-Is the SEA report user-friendly?
-Does the non-technical summary fairly reflect the full SEA report?
-Are all the relevant issues, including alternatives, discussed?
-Are the forecasts and the associated methods presented clearly?
-Have the public and the consulters been involved in the SEA process? (European Commission, 1999)

2.4.1. Use of review criteria, other methods and SEA report review results.

In order to ensure objectivity in the review of the SEA report, a number of methods may be employed. These include the use of review criteria, the use of SEA report review consultants, the setting up of an independent review body, the

publication of the results of the review and the involvement of consulters and the public. Wherever possible, skilled professionals should be used in the review process, whether within the decision-making / environment authorities, within the independent review body (if it exists), within the review consultancy (if engaged), or within consulted groups, including public interest groups.

The outcome of the SEA report review should be made public. In addition, the various comments arising from reviews of the SEA report by consulters and by the public should be placed in the public domain (e.g. by publishing a report or by allowing access to the decision-making authority's SEA file).

2.5. Decision Making

Integration of environmental impacts into decision-making occurs at many stages of the planning process. It should take place every time; when an informal decision is made about which plan options are to be developed further and which options are to be rejected. These intermediate decisions are incorporated in the final proposed plan or program, which is submitted for formal decision-making. For decision-makers to make their choice, the results of the SEA need to be integrated.

The SEA report, and its draft versions, should form part of the general assessment documentation. This documentation should explain the trading-off of different impacts and the rejection of alternative plan options.

The final decision about the plan will be based on the general assessment documentation, but it will also incorporate political considerations. In order to ensure that environmental considerations are not ignored during decision-making

it is useful if a record of decision is prepared. This should contain a full justification of the reasons for taking decisions where environmental factors have to be balanced against other factors. It should also set down environmental protection requirements to be used during decision-making by provincial levels of government.

2.6. Monitoring

Monitoring the plan or program has several aims. It tests whether the plan or program is achieving its objectives and targets. It identifies any negative impacts requiring remediation. It helps to ensure that mitigation measures proposed in the SEA are implemented. It gives feedback to assist in impact predictions for future SEA's. "Monitoring thus to refer back to environmental baseline, impact predictions, and mitigation measures. The environmental indicators can be used for monitoring" (Therivel, Partidario,1999).

In many cases, related monitoring data are already being collected for other purposes: for instance, air pollution emissions may be collected as part of integrated pollution requirements, or wildlife may be monitored for biodiversity action plans. "In other cases, specific monitoring schemes will need to be established. The cost of monitoring can be brought up for discussion, but are difficult to establish, even at project level" (European Commission, 1996).

2.7. Consultation and Participation

The aim of SEA is to take early account of the environment. This can only be achieved if the views of affected groups are fully taken into consideration at the various stages of the SEA process. The aims of consultation and participation in SEA are to:

-enhance transparency in decision-making, by providing information;
-obtain useful information about potential environmental impacts and their mitigation;
-increase support for the final proposal, for example by involving external groups in the planning process;
-avoid controversy, confrontation and delay later in the decision-making process due to public opposition;
-prevent the development of environmentally unacceptable transport infrastructure.

The following government and public groups should be consulted and invited to participate in an SEA:

-governments:
-the competent authority;
-national, regional and local authorities and organisations responsible for environmental protection, nature conservation, heritage, landscape protection, land use (spatial) planning and pollution control;
-sectoral governmental organisations which may be affected, such as agriculture, energy, fisheries, forestry;
-international agencies, e.g. those responsible for the designation of areas of international importance;
-governments and organisations in adjoining countries
-the public:
-local community representatives, landowners and residents' groups;
-groups representing users of the environment (e.g. farmers) and research institutes;
-environmental non-governmental organisations;
-the public in adjoining countries

2.7.1. Methods of consultation and participation

Consultation and public participation should take place throughout the SEA process. It is often focused on the scoping phase, when the issues for the SEA are selected and (especially) on the review phase, when reactions to the SEA report can be given. Sometimes there may an inter-agency group exist, which comments on drafts at each phase, supplemented by wider participation on fewer occasions.

Agency consultation usually involves the circulation of draft documents, bilateral meetings, round-table meetings and informal discussions. Despite agencies' technical competence within their own fields, to elicit full responses it is helpful to make documents as user-friendly as possible and to make the contribution sought clear.

The main types of public consultation and participation are:

- Informing affected groups:
- printed materials (brochures, displays and exhibits, direct mail);
- use of the media (newspapers, news conferences, newspapers, radio and TV);
- public information sessions (open houses, site visits, field offices);
- Use of the Internet (web site describing the SEA)
- Listening to the opinions of the public:
- surveys (interviews with key people, polls and questionnaires);
- Large meetings (public meetings, public hearings, conferences)
- Direct participation of the public (or agencies):
- small meetings (public seminars, focus groups);

- advisory groups (e.g. task forces);
- problem solving techniques (e.g. brainstorming, simulation games);
- consensus building techniques

CHAPTER 3

EXISTING STUDIES

Strategic environmental assessment has emerged in the last few years as a term for tools, which aim to integrate environmental considerations into proposed laws, policies, plans and programmes. However, in one form or another, SEA has been in place for some time. The preparation of legislative ad programmatic Environmental Impact Statements has been an integral element of United States practice under the National Environmental Protection Act (NEPA) 1969. Other SEA-type approaches reflect an extension of EIA trends, including area-wide and regional assessments, and policy-level reviews as part of public inquiries and environmental reviews. Early references to these applications can be found in various sources.

The works undertaken by EC and United Nations have great contributions to the evolution of SEA approach. These works on SEA created a base for discussion, consensus and a highly agreed SEA approach on all over the world. United Nations Economic Commission for Europe (UNECE) convention on EIA in a Transboundary Context (Espoo, Finland) was the origin of the idea that a need for a wider approach in environmental assessment field. Espoo convention bringed the application of EIA for PPPs, which had shown the need for the assessment of Plans Programs and Policies and lead the improvement of SEA.

Table 2: Evolution of SEA

Year	*Description*
1969	**National Environmental Protection Agency (NEPA)** ***All federal agencies should consider environmental effects of proposal for legislation***
1978	**United States Council for Environmental Quality (CEQ)** ***Specific requirements for programmatic assessment***
1990	**European Economic Community** ***First proposal for a Directive on the Environmental Assessment of Policies, Plans and Programs***
1991	**United Nations Economic Commission for Europe (UNECE) convention on EIA in a Transboundary Context (Espoo, Finland)** ***Application of EIA for policies, plans and programs***
1991	**Organization for Economic Cooperation and Development (OECD)** ***Specific arrangements for analyzing and monitoring environmental impacts for program assistance***
1992	**United Nations Economic Commission for Europe (UNECE)** ***Publishes its report on SEA state of knowledge and experience***
1997	**European Commission** ***Proposal for a Council Directive on the assessment of the effects of certain plans and programs on the environment***
2001	**European Commission** ***Council Directive is enforced on the assessment of the effects of certain plans and programs on the environment***
2003	**United Nations Economic Commission for Europe (UNECE)** ***SEA Protocol is opened to the signature of the parties***

Different countries have different approaches on SEA. Every approach reflects the decision-making system, politic structure and environmental approach of these countries. For example, in political systems that rely on closed and non-participatory traditions, it is hard to make the legislative proposals open to public information as a part of the assessment of their environmental effects. However, effective application of SEA also requires open and accountable political and organisational Systems (Rosario, 1996). At the same time, it pushes these systems to be open.

Examples of regulatory systems of full SEA are still relatively scarce. With a very few exceptions (eg New Zealand, Norway, the Netherlands and the US), most countries in which SEA has been carried out in practice do not yet have a legislative process (Therivel, Rosario, 1999). However, EU SEA Directive (2001) is published and every member country will enforce its own regulation by 2004 and UN SEA Protocol is signed in 2003. Two milestones of SEA are the indicators of a common approach, which is agreed on between all parties. For many years, the SEA approaches were the main discussion point. Nevertheless, today, the discussion seems to be carried out on the implementation of formalised approaches in developed countries.

Most countries relate SEA to sustainability goals, on the grounds that SEA may assist the decision-making process by influencing the design of more sustainable policies and strategies. In some cases sustainability remains an implicit background policy (eg in US, Sweden, Norway, Finland, France and the UK). In other cases sustainability issues are used as benchmarks against which objectives and criteria in SEA can be measured (eg Canada, the Netherlands, Denmark), or as a strong policy that helps to shape new forms of decision-making in support of sustainable development (eg Australia, New Zealand).

SEA is emerging in the countries where there is a more extensive experience with EIA as an extension of existing environmental assessment practices (e.g. US and the Netherlands). Where regional or local planning practices have dominated the environmental policy arena, SEA is more incorporated within planning practices (e.g. Turkey).

3.1. SEA Regulations

This headline provides a summary of the analysis of the extent of SEA in each of the countries including all European Union (EU) Member States, some examples from Non-EU countries and some examples of developing countries. There are not many sources to examine the situation in developing countries since the subject is very new for them.

Workshops and meetings on SEA are good basis to derive the data for that purpose. Because of this, the current SEA approach and legal structure of the developing countries is derived from the workshop that is executed in Tunisia between 2-6 December 2003 organised by Mediterranean Environmental Technical Assistance Program (METAP). METAP countries are given below;

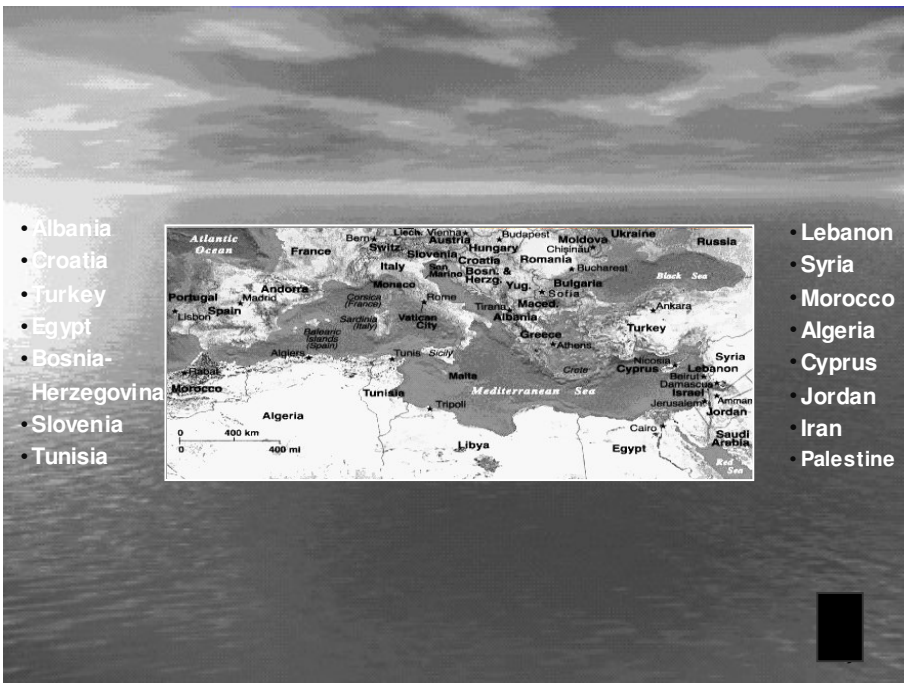


Figure 1: METAP Countries

Existing structure is given in the context of developed and developing countries because; SEA is a process, which costs time and money. The SEA will be most efficient and effective if it is started early in plan-making process, and integrated with sustainability appraisal. Under these conditions, authorities should expect to spend roughly 50-100 person-days on an integrated SEA (Levett, Therivel, 2002)

Today, the developing countries are decentralising their old industry to underdeveloped regions of the world and becoming information societies. They are aware of the environmental priorities and the consequences of the development actions. Many of these countries are ready to pay the cost of SEA implementations. There are also some supports for encouraging SEA implementations as European Union Regional Structure Funds for the EU

members; this will probably give acceleration to the SEA examples in the future in developing countries.

3.1.1. Developed Countries

SEA is a legal requirement for half of the countries given above. By the EU SEA Directive, all the EU member countries will publish their own regulations until the end of 2004 and SEA will be a legal requirement for all these countries. Many successful case studies and implementations on SEA are being carried out in these countries.

Some of the countries apply SEA on policies, plans, programmes (PPPs) and some of them to plans and programmes. In addition, the minimum requirement of the EU SEA Directive is applying SEA to plans and programmes. Initially, the draft versions of the UN SEA Protocol was designed for PPPs. However, the protocol is opened to the signature with taking into account only the plans and programs. It is possible that EU Directive was effective on this decision. The reason that policy level decisions are excluded from the scope of SEA (even they are crucial for SEA implementations) might be several.

Major reasons may be the level of integration with environmental assessment and transparency problem. Scope of both the EU and UN legislative approaches are full SEA approaches and the countries as Netherlands use more simple SEA techniques as "E-tests" to the policy level decisions.

The time and cost effects of full SEA studies might not be preferable for them. Transparency of the decisions is a must for full SEA and many countries are not willing to share their policy level decisions with the public. The table below describes the legal structure and current situation of SEA in developed counts.

Table 3: Existing Legal Structure of the Developed Countries

Country	Commentary on SEA
Austria	***SEA not a legal requirement***. Progress towards environmental integration at strategic level. Examples include the right of the environmental Ombudsman in the province of Styria to comment on all laws that are likely to have environmental effects and to propose alternatives.
Belgium	***SEA not a legal requirement***. Main progress towards SEA being carried out in region of Flanders: Current research project into "Best Available Practice" approach to SEA; proposals to introduce environmental assessment of plans and programmes into present EIA Decree; on-going voluntary SEA of transport plan. In the past voluntary SEAs have also been conducted in the Wallonia region.
Denmark	***SEA a legal requirement*** for: Bills and government proposals. Ministerial guidelines on SEA in place since 1995. No public participation in assessment procedure although chance to participate in preparation of Bill during customary consultation process under Danish legislation. State Budget proposals are assessed for environmental impacts in selected areas. Voluntary SEA of National Land Use Plan carried out. Also research and voluntary SEA of County and Municipal plans.
Finland	***SEA a legal requirement*** for: State action plans and economic strategies; policies on taxation, payment and subsidies; plans and programmes relating to environment, energy, transport, industry, forestry and agriculture; Committee reports – here assessment of environment, social, administrative and economic impacts is required; Government proposals. Guidelines in place since 1999.
France	***SEA a legal requirement*** at policy level for proposed laws and also at regional levels for Master and Zoning plans. Voluntary SEAs have taken place since 1980s in areas of land use planning. SEA methodology recently developed for transport infrastructure and applied to plans and programmes at regional level.
Germany	***SEA not a legal requirement***. Spatial and sectoral planning procedures have made provision towards SEA particularly with regards to landscape planning and zoning/building planning.
Greece	***SEA not a legal requirement***. SEA applied on voluntary basis, although in very limited form, in the areas of land-use planning, development plans and regional plans. There is a requirement to undertake environmental assessments of regional development plans with regards to EU Structural Fund regulations. Documents from these environmental assessments are not publicly available.
Ireland	***SEA not a legal requirement***. National development plans require an environmental assessment as a result of requirements under EU Structural Fund regulations. Recent government proposals for Eco-Auditing (environmental appraisal) of policies. Pilot Eco-Audits commenced June 1999. Under the Sustainable Development: A Strategy for Ireland a proposal exists for the development of a SEA system within three years
Italy	***SEA not a legal requirement***. A new framework Law on EIA, currently under debate, makes provision for SEA. Environmental assessments are carried out under requirements of EU Structural Fund regulations for regional development plans and for certain plans and programmes in the Valle d'Aosta Region. Guidelines on environmental assessment in relation to structural funds are available from the Ministry of Environment.

Luxembourg	***SEA not a legal requirement***. Insufficient information available to make a full assessment of the status of SEA.
Netherlands	***SEA a legal requirement***. E-Tests (environmental tests) applied to existing and proposed legislation, policy plans and regulations. Current assessments underway include an inventory of policy areas at national level and an E-Test of the 5th national spatial plan. Strategic level EIA applied to decision relating to site selection and strategic planning. Voluntary SEA methodology for application at most strategic levels developed in 1995 (SEAN).
Portugal	***SEA not a legal requirement***. Regional development plans require an environmental assessment under EU structural fund regulations.
Spain	***SEA a legal requirement*** at regional level in the communities of Castilla-La Mancha, Castilla y León and the Basque Country. Other regions include certain PPPs within the list of activities that require EIA. Environmental assessments occur during the preparation of regional development plans under EU Structural Fund regulations.
Sweden	***SEA a legal requirement***. EIAs included in Government Bills and other proposals of comprehensive decision-making. Progress underway to include EIAs at early stage of political process under the Planning and Building Act. Research project also taking place on SEA case studies.
United Kingdom	***SEA not a legal requirement***. However, environmental appraisals of development plans are required under an administrative procedure with government guidance and are being extended to the regional planning level. Guidance on environmental appraisal of polices has also been published but few examples of its use exist to date, although there is growing pressure to use it more often. Forms of SEA are also carried out on water resources strategies and multi-modal studies. Detailed guidance on SEA of multi-modal transport studies is soon to be published by the Government.
Non-EU Countries	
Australia	***SEA not a legal requirement***. The National Strategy for Ecological Sustainable Development (NSESD) includes a strategic approach to EIA and has been applied on an inter-jurisdictional and sectoral basis. For example, the NSESD has been applied at national level for strategies relating to forests, waste management and biodiversity.
Canada	***SEA a legal requirement***. Ministers at federal level are required to conduct a SEA on proposed policies, plans and programmes. Departments and other agencies are encouraged to do the same. Public concern or review of potential environmental consequences may initiate a SEA. SEA guidelines exist.
Latvia	***SEA a legal requirement*** for Territorial planning. The Law on Environmental Impact Assessment (in 1998 it replaced the Law on State Ecological Expertise) 1999 includes territorial planning under the definition of proposed activities that are subject to assessment of environmental impacts. This part of the EIA requirements has not yet been enforced. The law on EIA exempts plans of strategy, action plans, projects of national importance and development programmes from environmental assessment. However, it states that such plans must include a section providing information on impacts on the environment of the project in question.

New Zealand	***SEA a legal requirement***. The Resource Management Act (RMA) requires EIA for all regional and district policies, plans and programmes. At a national level executives from all government departments should consider environmental goals in annual budget planning processes. Ministry of Environment can review policies of other departments that have potential for significant environmental impact.
Norway	***SEA a legal requirement***. Since 1995 an environmental assessment is required for all new legislation and policy decisions. The administrative, economic and environmental effects must be assessed. Voluntary SEAs occur at regional and local levels within a number of counties. A project on the application of EIA principles in land-use planning has been undertaken in a number of municipalities. Also, EIA principles are being applied to sectoral programmes.
Slovak Republic	***SEA a legal requirement***. Article 35 of the EIA Act covers, to a certain degree, the strategic level. Under this section of the Act environmental assessment is required for substantial development policies, territorial planning documentation and any proposed general legal binding directions. It should be noted that no generally binding legal directive has yet been reviewed by this procedure. In practice, SEA is a weak instrument, because there is a gap between that engaged theoretical legislation piece and the planning practice.
USA	***SEA a legal requirement***. Under the National Environmental Policy Act (NEPA) there is a requirement that all legislation or major federal actions, which significantly affect the quality of the human environment, include a 'detailed statement' assessing the environmental impacts. A well-developed environmental assessment programme exists at both federal and state levels.

(SEA Final Report, May 2001)

3.1.2. Developing Countries

Poverty is the first priority in developing countries and the government policies do not always support the success of the environmental assessments. When we add the low awareness level and capacity in the environmental field, the situation seems to be worse.

Therefore, "how will we integrate SEA with our decision making system" is a special question that should be discussed based on the situation in developing countries. A unique approach for these countries should be developed according to their own needs and priorities.

The Tunisia workshop indicates the lack of knowledge, experience and still a big debate on even the principles of SEA for the developing countries. All of the countries participated was aware of EIA and have their own legislated structure related with EIA. However, none of the countries has a legal arrangement related with SEA and only a few of them are working on preparing one.

Some how, all of them have an institutional structure and responsible bodies for EIA practices but, still have a considerable amount of insufficiency for a proper environmental assessment procedure. The lack of proper environmental assessment probably will effect the future implementations of SEA. Characterization of EIA in METAP Countries is given below;

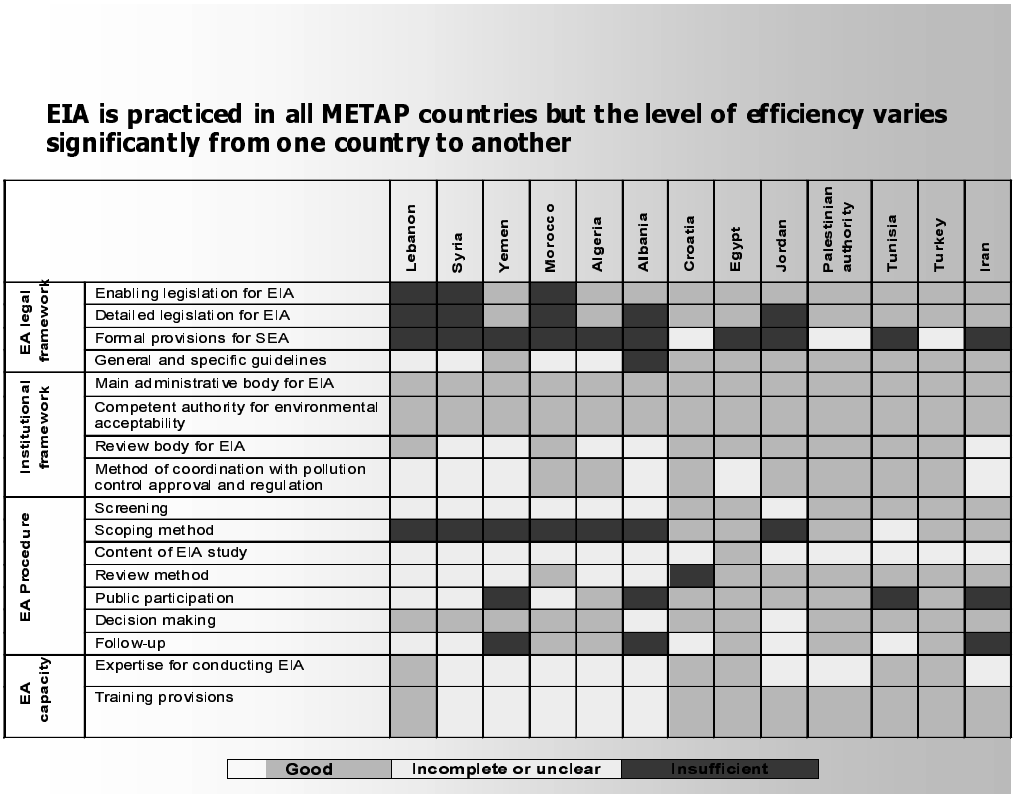


Figure 2: Characterization of EIA in METAP Countries (METAP Project, 2003)

Only Turkey and Lebanon were the countries that had serious SEA studies and were preparing Draft SEA Regulations. In addition to these countries, Tunisia had an EIA regulation, which also covers the aspect of assessing the possible significant environmental effects of the plans and programmes. The remaining countries were even not aware of the fundamental aspects of SEA and were willing to learn those principles.

Table 4: SEA in Developing Countries

Country	SEA Legislation	SEA Case Study/Project	Awareness (Expert level)
Palestine	-	-	Low
Jordan	-	In private sector (Water sector policy)	Average
Iran	-	Initiative for executing with UNDP	High
Turkey	Draft SEA regulation	One for Land Use Plans One for Draft SEA Regulation	High
Lebanon	A Draft is being prepared	One for a draft regulation One for Gasoline policy	High
Yemen	-	-	Average
Albania	-	-	Low
Syria	-	-	Low
Algeria	-	-	Low
Libya	-	-	Low
Morocco	-	-	Low
Croatia	-	-	Average
Egypt	-	-	Low
Tunisia	EIA for plans and programmes	One in near future	High

There is a big amount of need for training, awareness rising and learning-by-doing aspects for most of these countries. If possible, the trainers should be from the similar countries and a regional centre for training activities, building approaches and disseminating expertise should be established. Otherwise, imported approaches on SEA from EU or UN might not facilitate in the future effectively. It is very clear that these countries have their own priorities and needs.

Turkey is a very similar and at the same time very different example when considered with these countries. On one hand our economic situation, institutional structure and decision-making structure is very similar with them, on the other hand, the economic situation of Turkey is better than most of these countries and our country is separated form these countries as a EU candidate country. Turkey is also in the urge of adopting the EU legislation as a candidate country and this pushes our country for some immediate changes in our decision-making structure.

According to the METAP exercise given above, best practice of EIA is executed in Turkey. This also indicates the differentiation of Turkey from these countries. Therefore, Turkey should both examine the EU and developing countries approaches. Turkey should adopt the EU SEA Directive with ensuring the minimum requirements and take into account the developed experiences of the countries.

CHAPTER 4

SEA STUDIES IN TURKEY

Turkey has two SEA projects. Initial one is a pilot project, which is executed in Çanakkale Province. This is a welcome stage for SEA. The second project is preparing draft legislation for Turkey. Çanakkale pilot focuses on the integration of SEA with the strategic level plans. The second example on SEA focuses on preparing a Draft SEA Regulation and there is a pilot within the project, which is used to test the progress of the Draft SEA Regulation. The pilot project will be implemented on the Territorial plans and has a crucial role in proposing the eligible SEA procedure for Turkey.

For a better understanding of SEA and its integration with planning process and to design a prototype, it will be useful to describe the works had been done for this purpose. After defining the activities done for this purpose, with using the lessons learned, the next stage will be drawing the skeleton of the prototype.

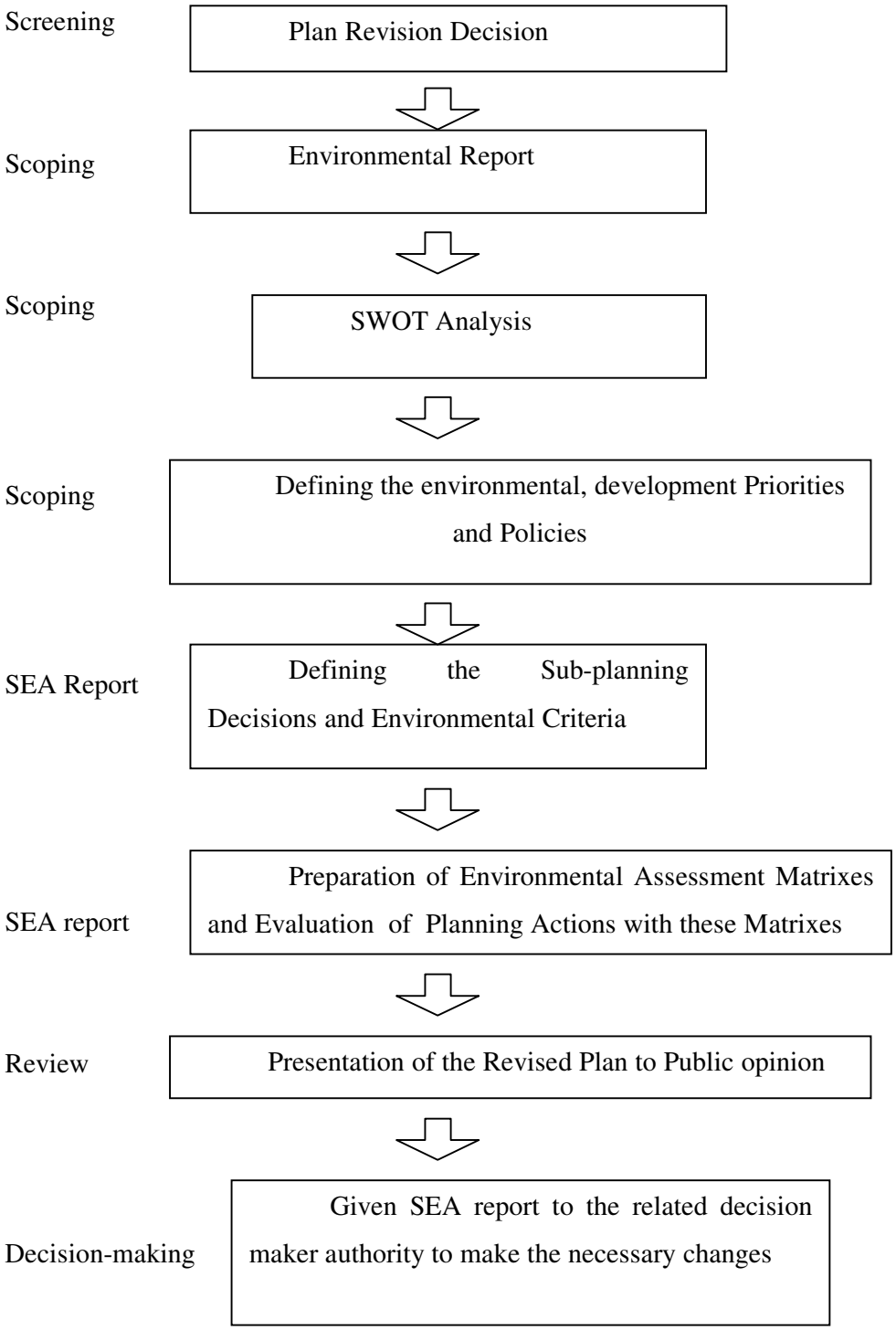
4.1. Çanakkale Province Territorial Plan SEA Pilot Project

The case study represents a country in transition as well as a country with a history of a centralized administration system. It deals with the SEA of the land-use plan (also called 'territorial plan") of the Çanakkale Province. Because of the absence of regional plans (they are not prepared even though legal framework exists) and because of scope of their aims; the highest scale of physical plans, Territory plans might be called as strategic.

Çanakkale is chosen as project area because of its natural, historical values, simple economic and social structure, which might lead the project team for an easier understanding of SEA. As a welcome stage for SEA, the simple economic structure of the project area was eligible.

The stages of the case study had not been implemented as given in Chapter 3 (Principles of SEA). Because, the pilot was learning-by-doing process, the Ministry of Environment experts represented both the Environmental Authority and Development Authority. The process was designed particularly for its necessities and SEA carries out an elasticity, which permits a design for every case study.

Table 5: Çanakkale SEA Procedure



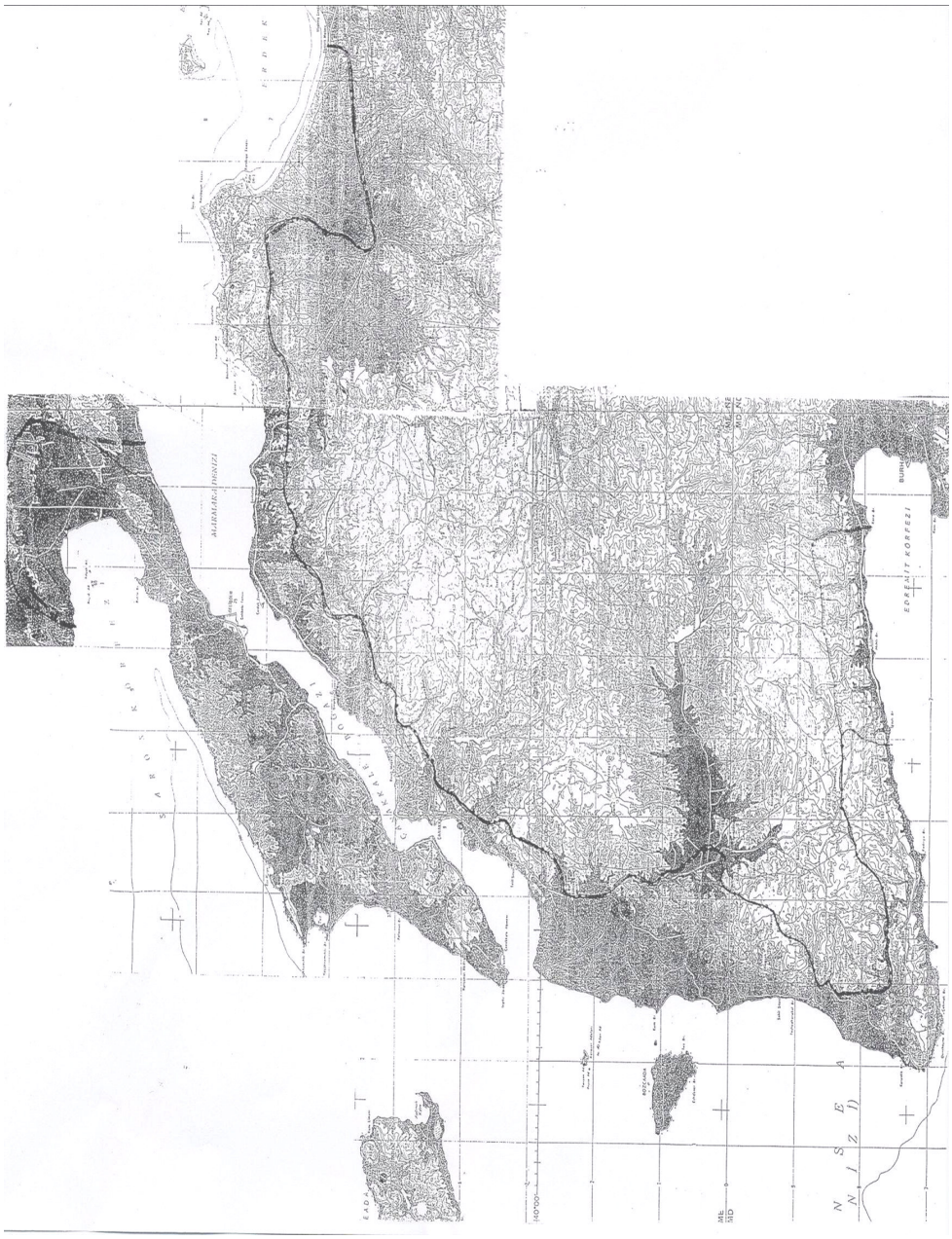


Figure 3: Project Area

Planning and environment groups are established inside the Planning Department in order to carry out the project. In a real SEA example the data should be collected by one group; Competent Authority, and the environment authority should be consulted. However, for the purpose of this study (learning-by-doing) and the absence of a real authority in the pilot project, the method had been changed.

These two groups worked simultaneously, separate during the project, and made discussions at the end of every step. SEA process had started at the initial stage of the planning process. SEA needs to be integrated at the earliest stage of the planning process. Otherwise, waste of huge amount of time and effort to design a new plan or ineffective environmental assessment should be considered. This experience is the first crucial determination for the project team on the integration of SEA with the strategic level decisions.

4.1.1. Plan Revision Decision

The first step of the project, defining the current situation and collecting the required data, was completed in Çanakkale. During the study, some imaginations on the land use was occurred at the field. Many discussions and two main meetings achieved about the current situation of the region, with the participation of related institutions and communities.

4.1.2. Environmental Report

A baseline data (sectoral, environmental and physical), which was very important for the planning activity of the region was collected. Environmental report of Çanakkale Province 2000 (including air, water, soil quality and pollution, flora and fauna existence and a general situation of natural resources)

and verbal, documental information of the participants on socio-economic structure (industry, tourism facilities and etc.) was used for the project.

However, the problem was the lack of particular data for the project area. This situation had remained during the project as a problem and lasted with insufficient assessment of environmental impacts of the proposed planning actions. Although this was an important problem, this also teaches us a lot about the eligible data needed for the SEA process.

Table 6: Issues with Significant Importance on future Planning Activities

-Infrastructure weaknesses of tourism, industry and transportation sectors and lack of human and finance capital were the main obstacles overshadowing development of Çanakkale.
-Marine pollution was over the standards near the coastal towns
- The development of the Çanakkale provincial centre was limited with the natural and artificial thresholds (Marmara Sea, military areas, the airport and the flight corridors, areas of forest). The direction of the current development was leading to a pressure from the corridor among these thresholds towards the fertile agricultural areas, and destroying the precious agricultural areas.
-The budget extended to the highways was too insufficient in order to renew the highway network, and to meet the needs of this network.
-There were some external implementations, which does not obey the current plan decisions.
-Lack of regional plans caused difficulty in determining and indicative vision for Çanakkale in the future, and also hinders converting the possible scenarios into policies, strategies and physical plans
-It seems that the essential role of the said potential of the tourism depends the carrying-out of the necessary planning and promotional activities; the completion of infrastructure and transport deficiencies; building of modern tourism facilities also having the local characteristics; and encouraging of investments, which are required for all the above activities both within and outside of the province.
-In parallel to the development of the tourism sector, there are some demands for investments for angler wharfs-ports, harbours; and marinas.
- Development of the industrial sector was not supported through industrialist. Only investments on the shore such as vessel building – dismantling - repairing are encouraged which in a way cause to develop industry and trade
-Other major developments in the province were seen in fruit growing, vinery, and olive producing sectors. Hence agriculture based industry is observed as a prominent sector.
-Municipalities make small-scale plants, which are not compatible with the larger scale development plants. This indicates that the effective environmental plans were not put into application sufficiently; hence, some plan revisions are needed.

4.1.3. Swot Analysis

The contribution of SEA into the planning process initially felt at this stage and the participants started to realise what was SEA used for. The contributions of the local partners were at a very high level. They always focused on crucial aspects and made the planners to care attention on them. Planners acted as navigators rather than decision-makers within this step. This level of local participation to the planning process was very new to Turkish experience. This level of participation and contribution gave an imagination to the project group of the fruitful results of integrated SEA and planning process.

This way of approach was a good example of public participation and the planners, environmental experts carried a role of navigation. They gave importance to local knowledge and tension. Two separate SWOT analyses are realised; the first one is on the environment, the second one on the economic development.

Table 7: SWOT Analysis (Air)

Strengths	**Weaknesses**
There is not any waste burning facility The forests are 54% of the total area There is not a high density polluter industry in the province Çanakkale districts already started to use natural gas. The pollution level is low in Çanakkale. Wind power degreases the pollution.	Ezine District Cement fabric disseminates emissions. Clean energy is not used in urban heating. The lack of wind corridors in plans, the air pollution originated by the surrounding cities and local polluters may cause problems.
Opportunities	**Threats**
Traffic originated emissions are under control.	It is possible that the emissions of the surrounding industrial facilities will cause pollution with the wind.

Table 8: SWOT Analysis (Protected Areas)

Strengths	**Weaknesses**
Gelibolu, Troy Historical National Parks, Kazdağ Protected Area are inside the Province. Biological diversity is rich. There is sufficient number of experts to make studies of the protected areas.	There is not any legal arrangement, protection status for the Wetlands of the Province. The extension of the agricultural area and the coastal development Threats the special areas.
Opportunities	**Threats**
The biological diversification areas might be taken in the scope of Protected Areas with the decision of central Government.	There is a lack of data for the wetlands, which is an obstacle for them to be protected areas.

Table 9: SWOT Analysis (Water Resources)

Strengths	**Weaknesses**
Fertile lands have quality underground water. Industry in not dense in the area, the drinking water resources is well protected from housing; the water is clean. Dwelling wastewater is not discharged to the irrigation dams. The drinking water resources are sufficient. The sea remains clean because of the high flow speed of Çanakkale Pass The experts regularly monitor the water pollution. The 1/25.000 scaled plans of Water reservoirs are prepared by the provincial branch of Ministry of Environment.	Fishery is not a strong economic potential. Underground resources are under the threat of saltiness because of overuse. Over use of fertile pollutes the underground waters
Opportunities	**Threats**
State Hydraulic Works have some works to increase water levels of dams.	The wrong decisions of the Governments (high-density coastal second housing) sea pollution may occur. Flows are carrying pollution of Marmara Sea. Particular sea pollution is observed at the coastal areas of the Province, which are near to the industrial polluters of Marmara Sea. There are legal arrangements for the dry of wetlands.

Table 10: SWOT Analysis Natural Resources and Land Values

Strengths	**Weaknesses**
The 75% of the agricultural lands are fertile lands. The 54% of the land is forest area. Industrial agriculture is eligible. The water is rich of fish. Çanakkale is the second important fishery centre of Turkey and the approximate of Europe increases the export potential.	Dwelling and industrial wastewater creates pollution on water resources and agricultural land. The damage of nature and agricultural facilities, which are performed without and caution, causes erosion.
Opportunities	**Threats**
There is an important international project (MATRA) implemented on Çanakkale Province, which aims the sustainable use of natural resources.	There is a lack of data for the heavy metal polluters. The construction of highways on the fertile lands causes the loss of these areas. The consciousness for the erosion is low and State does not help this problem.

Table 11: SWOT Analysis (Landuse)

Strengths	**Weaknesses**
The flora is various. There are valuable kinds of medical plant. The richness of flora, huge forest areas, coastal sides creates a habitat for wild life.	Endemism ratio is low.
Opportunities	**Threats**
Gene protection areas are under the support of World Bank.	Human activities have negative effects on flora and fauna species.

Table 12: SWOT Analysis (Noise)

Strengths	**Weaknesses**
The level of traffic noise is under the permitted levels. There is not industrial noise problem since almost all industrial facilities are out of the city centres.	Continuous and irregular construction facilities cause noise.
Opportunities	**Threats**
The areas that are sensitive to the noise are protected with national law.	

Table 13: SWOT Analysis (Coastal Zones)

Strengths	**Weaknesses**
Coastal zones are mild in climate. Tourism facilities have special certificates and buildings are harmonious with the nature.	Uncontrolled and unplanned housing and other building facilities causes negative effects.
Opportunities	**Threats**
Most of the Aegean coasts are natural, historical and archaeological Sites.	The second house pressures.

Table 14: SWOT Analysis (Wastes)

Strengths	**Weaknesses**
80% of solid waste is renewable. The municipality (far from waste deposit areas) buries refining mud. Medical wastes are smoothly deposited. The municipality sells the wastes of the biggest waste deposit area of the province (Çanakkale centre) by tender and they are recyled. Dardanel Food Industry recycles its wastes.	All of the wastes are collected in wild deposits. Search for the new waste deposit areas is problematic. Leather companies (Ezine, Biga) are dangerous polluters. The local university is on the wind direction of waste disposal area. Dwellers waste problem is increasing with the increase of the population. Most of the facilities are without recycling units.
Opportunities	**Threats**
There is a protocol for the separate collection of the wastes at their origin between Çanakkale municipality and ÇEVKO Foundation (02.02.1999). Recycling Project had starts in Çanakkale centre in 10 pilot areas with 10.000 population (06.06.1999)	

Table 15: SWOT Analysis (Cultural Values)

Strengths	**Weaknesses**
Hand works. Historical and cultural background is very rich.	Previous decades of the city centre are not harmonious with the original architecture.
Opportunities	**Threats**
Gelibolu and Troy Historical National Parks Recreation facilities realized by the State organizations Dense tourist visits create the demand and consciousness for protection (economic reasons).	Dense tourist visits create the necessity for protection. The forest fires

Table 16: SWOT Analysis (Mines)

Strengths	**Weaknesses**
Natural resources are rich. Ceramics raw materiel, cement raw materials, lignite, natural construction materials, lead, zinc, copper are existed.	The mines are randomly processed. The nature is damaged. Uncontrolled tree cutting exists. Old mine areas are left without rehabilitation. Danger wastes are remained after the process of metal mines.
Opportunities	**Threats**
Gallery explosions are restricted because of intense shakes. The mining facilities are under the control of laws	The mining facilities are not audited efficiently. Current legal measurements are not adequate.

Table 17: SWOT Analysis (Tourism)

Strengths	**Weaknesses**
Historical, cultural and archaeological values (Troya, Alexander Troas, Neandrea, Assos (Behramkale), Apollon Smitheon, Dardanos)	Inefficiently organised tourism potential
Gelibolu National Park	Low level of service quality
Coastal areas and the island	Insufficient local tourism policy
Kaz Mountains and Ayazma Region	Insufficient physical plans
Geographical location	Insufficient presentation of the area
Tourism diversity potential (proper land for ecological agriculture, ship sunk)	Secondary housing
Public support	Insufficient transportation infrastructure
University	Insufficient tourist capacity
Undamaged nature	Negative effect of disorderly urbanisation on the historical patterns
Fishery	Lack of tourism consciousness and education
Geothermal resources	Solid wastes
Expertise in the traditional handworks	
Opportunities	**Threats**
Approximate to metropolis cities. Sea and air transportation is ensured	Çanakkale is not a priority region for the national policy.
University students and soldiers	Beach tourism season is short because of the climate
Historical roots with foreign countries	Forest fires
Foreign investment supply	Bureaucratique obstacles
	Çanakkale Pass trafic
	Second housing pressure
	Economic crises (February 2001)
	Wastes disposed to Marmara Sea

Table 18: SWOT Analysis (Production)

Strengths	**Weaknesses**
Developed agricultural production Agricultural based industry (Kale Ceramics and Cement Fabric) Mine resources (Lignite and gold) Water resources (fishery and tinned food – Dardanel, Marsan, Ulubaylar) Water products exportation Forest products Geothermal power Alternative energy resources (wind, boğaz flow, geothermal resources, biomass) Viniculture (Wine production) Leather industry Milk products Beekeeping Ecologic agriculture Handworks Variety of the agricultural products	Insufficient transport network and infrastructure Lack of pasture areas (also existed ones need protection) Insufficient technology for storing Insufficient marketing strategy Division of agricultural lands via heritage. Overuse of underground water Insufficient transport infrastructure
Opportunities	**Threats**
Proximity to the metropolis cities Proximity to European markets High demand for the ecological products in developed countries Use of natural gas The demand of international investors to specialise organised industry area on wind energy	Lack of national transportation policy Lack of encouragement policies for agriculture and industry (also wrong policies) Lack of national production programs Global warming Erosion Sea pollution

The experts of Ministry of Environment corrected the results of the SWOT analysis. The results shown that the natural structure of Çanakkale was not destroyed yet. The water, mine resources were rich in the province. Although there were not any major environmental problems in the area, there were not effective preventions for the actual and future problems also.

The tourism potential was high in the region. Historical and natural resources creates this added value. This potential was not used efficiently. The tourism season was short and diversification of the activities were not recognised. Agricultural based industry was dominant. Sea originating products were also important for the economy.

The educated population in the province was high. The people were aware of environmental aspects. A good example for this had been occurred during the SWOT analysis. The "planning group" had proposed an alternative development based on ship construction facilities in Çanakkale. The alternative was only given to evaluate the negative effects of the facilities. Nevertheless, what the alternative meant economically, it did not mean anything. The participants of the meeting strongly rejected this alternative. They did not permit the evaluation. The 'ship construction' word itself was sufficient. The local branches of the ministries, municipalities, NGOs and chambers, unions were against a development generated by the heavy industrial facilities. The ownership for their province was strongly felt.

4.1.4. Defining the Environmental, Development Priorities and Policies

Historical, cultural values of the province were the strengths and opportunities of Çanakkale. The area, because of sea, mountain, nature tourism,

ancient cities, cheap accommodation and historical linkages (Çanakkale war) attracts the native and foreign tourists. The diversification of tourism activities (in addition to above; trekking, mountain biking, eco-villages) and to strengthen the current activities was aimed.

The agriculture was a dominant sector for Çanakkale and the experts, inhabitants were not willing heavy industry for the region. The agriculture-based industry was welcomed in common sense.

The electric is sustained by the wind power plants in Gökçeada. The Ministry of Energy already have projects on the wind plants for Çanakkale since the area is eligible for the purpose. Another tension for the sector was the wind power plants industry.

Environmental problems are not observed dense in the project area. The first priority is keeping the current situation and preventing the nature from harm. The second priority is to degrease the pollution levels by time.

4.1.5. Defining the Sub-planning Actions and Environmental Criteria

Sub-planning actions of selected sectors (tourism, agriculture based industry and wind power plants) were prepared (eg: development of village houses, infrastructure etc. for eco-tourism). There was only one alternative produced during the case study and the specific locations of the activities were not given since this would cause speculation over the land values. Although this seemed to be a conflict with the democratic and transparent structure of SEA, it was not. Because, the strategic nature of the decisions sometimes requires a level of secrecy and sufficient information on the locations of the sub-planning activities were given to the participations.

One alternative is not adequate for an SEA study. One of the major purpose for the process is producing at least the environmental friendly and 'do nothing' alternatives to compare with the 'popular' one. The ideal is having more than one 'popular' alternative and comparing them. The existence of the alternative plans is major factor for the SEA process. The basis of SEA procedure is to choose the most appropriate alternative for the region. The Alternatives should differ on time, scale and scope.

After current environmental data is collected and a development vision for the region was defined, only a plan alternative is prepared during the SEA process. The alternative is evaluated with the environmental criteria via different techniques. The most usual technique among the others is 'environmental assessment matrixes'. This is a simple way of evaluating the planning decisions. These matrixes are two sided schemes, which is formed by planning actions one side and the sustainability criteria on the other side. They were used to evaluate the possible negative and positive effects of the planning actions.

However, in countries as Germany and USA are good examples of the countries that use quantitative technique. Especially GIS techniques are used to evaluate the possible effects of planning actions. The major reason for the use of quantitative techniques in these countries is their opportunity to create necessary database. Because in some cases only creating a detailed data base takes years, many countries chooses more subjective and general SEA approaches.

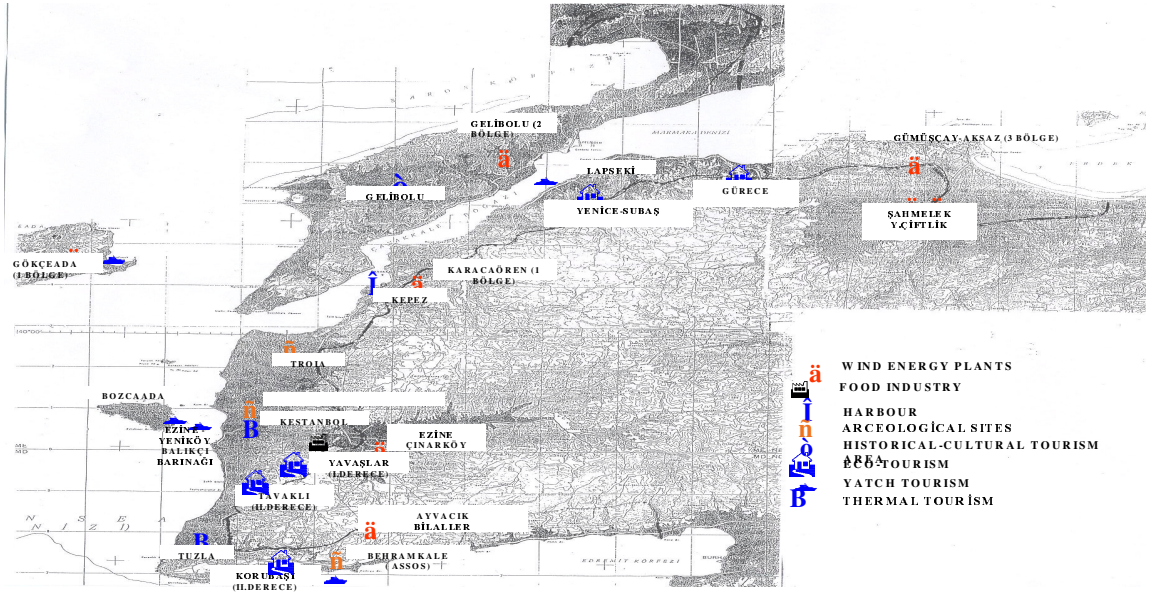


Figure 4: Çanakkale 1/25.000 scaled General Plan Scheme

The environmental criteria here in this study used to assess the alternative, were defined in accordance with 'A Handbook on Environmental Assessment of Regional Development Plans and EU Structural Funds Programs'. There were ten criteria in the handbook,

Table 19: Ten Major Sustainability Criteria (European Commission, 1998)

1 Minimise use of non-renewable resources	2 Use renewable resources within limits of capacity for regeneration	3 Environment-ally sound use and management of hazardous /polluting substances and wastes	4 Conserve and enhance the status of wildlife, habitats and landscapes	5 Maintain and improve the quality of soils and water resources
6 Maintain and improve the quality of historic and cultural resources	7 Maintain and improve local environmental quality	8 Protection of the atmosphere (global warming)	9 Develop environment al awareness, education and training	10 Promote public participation in decisions involving sustainable develop.

Another positive implementation of the project was the derivation of the sustainability criteria for the detail of a 1/25.000 scale territorial plan. The project team used the criteria that are crucial for the region.

4.1.6. Preparation of Environmental Assessment Matrixes and Evaluation of Planning Actions with these Matrixes

The planning actions and environmental criteria were used in "environmental matrixes" which are used to evaluate planning decisions according to environmental criteria. The matrixes are prepared in the Ministry of Environment and taken to the Çanakkale for filling up. A third meeting had been organised for this purpose in the region. The aim of the meeting is to create a consensus n the Strategic Environmental Assessment of Draft Final Plan among the stakeholders in Çanakkale. The participants were almost the same of the previous meeting. With the help and suggestions of the local people and institutions, the environmental matrixes were filled up.

The results of the assessment is given in the 'conditions' column. The measurements that should be taken, the eligibility of the activity or only opinions and suggestions for some of the activities were given in this column. An environmental matrix generated in Ministry of Environment and filled up in Çanakkale is given below;

Table 20: Environmental Matrix (Food Industry)

ACTIONS	WASTES			AIR	NOISE	LANDSCAPE						NATURAL RESOURCES								CONDITIONS
	HOUSEHOLD WASTE	DANGEROUS & HAZARDOUS WASTE	INDUSTRIAL WASTE			FLORA & FAUNA	CULTURAL HERITAGE	CONSERVATION AREAS				FORESTED AREA	AGRICULTURAL LAND	PASTURES	WATER BASINS	COASTAL ZONES	WATER RESOURCES		MINERALS	
								HISTORICAL CONSERVATION AREAS	URBAN CONSERVATION AREAS	NATURAL CONSERVATION AREAS	CAL CONSERVATION						UNDERGROUND	SURFACE		
CONSTRUCTION OF COMPLEX FOR FOOD INDUSTRIES IN EZINE																				
ENLARGEMENT OF ROADS FOR TIRs&INCREASING THE ROAD QUALITY																				

4.1.7. Presentation of the Revised Plan to Public Opinion

There were not very strong arguments on the alternative at the public participation meeting. This was probably because of the consensus ensured during the planning process. Planners used to face with many court cases that occur after the planning procedure is completed in Turkey. The participation of local partners to the planning process effectively by healthy SEA implementations might also degrease the rejection of the plan. Since the plan will be build up with the affected parties, the ownership might be strong.

4.1.8. The completed environmental assessment and given conditions to the related decision-maker authority to make the necessary changes

The results of environmental assessment were given to the planning group, which had acted as 'planning authority' during the case study. The 'conditions' were created with the contribution of local institutions, groups and individuals. The 'conditions' were not obligatory, rather they were advisory. The core of the planning activity had been presented and was open to access.

The environmental concerns were already spoken. The plan was almost a consensus. The right to do as they wish was still in the hands of decision-maker. But, the idea was that; planning authority's decision was rationalised, negotiated and had been environmentally assessed during the process.

4.1.9. Key Success Factors

The key success factors are used to assess the success degree of the first Turkish SEA example. While assessing, it is considered that this was only a pilot project and some steps would not be performed ideally due to this reason.

Table 21: Key Success Factors

SEA needs to be a transparent process that allows environmental considerations to be highlighted.
✓ Almost all the relevant parties involved in the SEA process. They were also given all the details of the process and the assessment made.
Successful SEA assesses the impacts of more than one alternative options*.
• There was only one alternative plan prepared. Initially, the idea was to prepare two alternatives but the first alternative "ship construction industry based plan" was strongly rejected during the scoping phase.
Widespread involvement of stakeholders, policy makers and the wider public is crucial for successful SEA.
✓ It was ensured during the whole process. The most successful item within the project was the co-ordination and communication of the parties.
SEA needs to be a systematic process involving different institutions in a common reporting framework.
N/A This was a pilot project and the planner and environmental authority was both the Ministry of Environment.
The most successful SEA generally occurs where there is a legal obligation to require it.
• This was the first SEA project of Turkey. However, the practice of SEA process is the origin of the idea of a SEA Regulation for Turkey.
Successful SEA involves wide use and dissemination of baseline and assessment information.
• The baseline data was only found in the province level. SEA process requires the existence of eligible data. The absence of eligible data effected the planning and assessment process.
An independent body that can review or audit the assessment process and content is needed to provide sufficient incentive to carry out SEA and accountability.
N/A
Successful SEAs have been the start rather than the end of a process of

integration, and may be a catalyst for developing further guidance and training.
•✓ This indicator was not clearly ensured. A good learning process was executed but could not be fallowed by guidance because of insufficient knowledge on SEA.
All can learn from the process and from each other.
✓ This was a learning-by-doing process and training activities for each level of participants were successful.
Successful SEA is a continuing and iterative process in which the decision-maker is constantly being updated with the consequences of the implementation of the policy.
N/A
Successful SEA depends on high quality and rigorous application of assessment methodologies, whether qualitative, quantitative or both.
✓ A good example of SWOT analysis for defining the current tendencies and environmental matrixes for the evaluation of the planning decisions was implemented during the SEA process.

✓**:**Successful •:Unsuccessful **N/A:** Not Applicable

*this factor was not included originally

4.1.10. Conclusion

For identifying the impacts, both technical methodologies and expert's judgment methodologies have been used and beside the environmental impacts also socioeconomic ones have been assessed. The SEA served as an integration tool and development policy. It helped to integrate the environment into the strategic decision-making, but only to a limited extent.

The integrated structure of planning and environmental assessment process was observed to give acceleration for the healthy economic development of the region since SEA had given an opportunity to solve the environmental problems before they occur.

Çanakkale SEA Pilot indicated 'what SEA is' and 'how to design a SEA process. This was an initial stage for further SEA implementations. Therefore, as an initial project the success was more than expected in many ways.

Although general structure was successful, the lack of eligible data and the absence of alternative plans were major missing points in the project. However, this teaches the importance of data and existence of alternatives are crucial and directly affects the success of SEA.

The public participation process was the most successful part of the project. The local institutions, groups were interested with every part of the project. The ownership for their city and the environment was very high. The knowledge on SEA was very well disseminated. The contribution of the public was observed to give very vulnerable results for the planning and environmental assessment process if well organised.

All related parties shared the responsibility in a democratic manner. The decisions given by the participation and consensus of stakeholders strengthen the institutional coordination. The attitude of the local partners including competent authorities to the SEA process was very positive. We will also have an opportunity at the next headline to observe if the contribution of the national competent authorities to the SEA process is as positive as the local ones or not.

CHAPTER 5

HOW TO INTEGRATE SEA WITH THE PLANNING PROCESS FOR TURKEY

SEA should not be applied with the same process in every country. Every country has its own priorities and localities. An SEA approach should be developed for each country, which is based on the foundations of the SEA. To develop an eligible SEA model, it is necessary to describe the priorities and localities and the problems of current environmental system of Turkey.

The major factor, which interests the concerned public and media seem to appear as economic problems such as unemployment, inflation in Turkey. Environmental problems are not seen as crucial problems yet. Turkey is a relatively poor country and is not able to allocate sufficient human, finance resources in environmental sector.

Legal structure in Turkey is very complex to understand. Authority confusion is very widespread between the Institutions and Ministries. Laws and legislation have gaps, which cause ineffective implementations. They are strict and not durable to time.

Legislative structure in environment is based on punishment system and human, finance, infrastructure resources of the environmental authorities are not sufficient to carry out the regulations. Education on environment is not

sufficient. Environmental data is lacking in Turkey and the data available is generally found in provincial level.

The situation in environment field in Turkey is not excellent. Implementation of some environmental tools (e.g. EIA), which originates from developed countries are problematic. They do not work properly. Because, they are not formed by the consensus of all parties and they do not investigate the basis that they will fit on.

Current situation, problems and gaps of our planning system should be described to build a suitable SEA approach for Turkey. For the particular concern of this thesis, this description will be made over territory plans.

"Territory plans are prepared and implemented peculiar to Turkey" (Günay, 2002). Territory plans are prepared since 1969. The first example is "Marmaris Territory Plan" and it was prepared to organise the tourism pressure that was occurred in the region. "Demands that overflow out of municipality borders caused it necessary to make 1/25.000 scaled implementations" (Eke, 2002).

After the amendments to Act 6785 in 1972, 1/25.000 implementations had been made for the arrangement of coastal zones. Aim of the responsible authority was to prepare plans for all coastal zones of country. 1/25.000 scaled Territory plans were originally prepared peculiar to coastal zones and afterwards, started to be prepared for city centres. Today, most of the territory plans still exist in coastal regions of Turkey.

Territory plans can be described as a middle level between the regional plans and local implementation plans and "The content of these plans are not sufficient to meet the needs of strategic level decisions in Turkey" (Eke, 2003). Therefore, for many cases they are used to give an organised acceleration to one

sectors development in a certain region. Although the implementation is problematic, they are still subject to SEA since their decisions are descriptive for the physical development of regions and sectors and they are widely implemented in our country.

Problems of our current planning system and Territory plans can be summarised as:

- Power of planning function is given to 25 public authorities in Turkey (Ersoy, 1989; B.İ.B, 1999a). A serious co-ordination mechanism had not been created between these institutions. "Parties of implementation and inspection are left independent and their relations are not organised" (Balamir, 1999).

- Strategic level planning activities are lacking in Turkey. Current law describes regional plans, which should be prepared by State Planning Organization. However, regional plans are not realised in our country. The following plan stage is Territory Plans and the scope, content of these plans, the authority to prepare these plans is still discussed for 15 years. "The planning process in current planning model is a middle stage planning activity, which does not have a start or an end" (Ersoy,1999).

- There is no "implementation program" for the territory plans. The means of implementation does not exist. There is a lack of coordination between the municipalities, who should prepare lower level of implementation plans in accordance with territory plans. "At the end the combination of lower level implementation plans are rather mosaics; inharmonious and articulated to each other" (Eke, 2003)

- Our planning system is under the pressure of industrial development for 40 years and reduced to "development" term. Environmental aspects had not been seen as priorities.

- One of the major problems of our current planning system is the absence of participation in the process. Participation of the concerned groups and the public is only ensured after the process is finished. Therefore, the plans are hanged on the walls of the municipalities for 15 days to provide participation of these groups. There is no ownership created on the plan. There is not also any auditing institution or mechanism for the planning process.

In this thesis, SEA is not described a solution for all these problems mentioned above, but a tool to help these problems. A well defined SEA process is thought to provide a look to the environmental problems in a strategic manner.

SEA is a flexible tool that might be used case by case. Çanakkale Experience clearly shows us that integrated SEA process with a weak planning process does not give very beneficial results for the planning process. SEA might be described as an enhancement to the planning process; as the degree of planning process strengthens, SEA might be more useful for the process.

5.1. A Prototype SEA approach for Turkey

Today, planning process carries out many problems. "It is not possible to solve these problems with only planning and planners initiative. There is need for the legislative and administrative measures of other disciplines, which supports planning" (Eke, 2002). SEA might be seen as a legislative measure to support the planning activities.

However, integration of SEA with the planning activities might also cause some problems if it is not well designed. Some problems as the duplication of environmental assessment in both EIA and SEA level, time and cost added to the planning process and increasing bureaucratic actions might hinder the success. SEA prototype should not be an additional bureaucratic load for our current planning process. A Prototype SEA approach should be based on Turkey's priorities and needs;

- Should be cost effective -time and money- to execute
- Should give a priority to public participation process
- Should not be based on punishment and direct power of environmental authority over the planning authorities.
- Should be based on indirect control (using the media and public) over the planning authorities.
- Should be advisory for the planning authorities.
- Should be broad scale (to use insufficient environmental data effectively)
- Should make the plan alternatives obligatory and help to ensure a healthier planning process.

5.2. Adoption and Implementation of SEA Directive in Turkey

Absence of a legal structure related to SEA was an obstacle for the continuous structure of SEA in Turkey. All the useful work done at Çanakkale remained as learning process only. Initially, the local partners were very proud of the realization of this kind of project in Çanakkale. But, probably their hope turned to disappointment at the end. Therefore, both the success of the project and accession process was the origin idea of preparing a Draft SEA Regulation for Turkey, which is the second case study and experience of Turkey on SEA.

The Ministry of Environment and Forestry had started to execute a project with the title "Adoption and Implementation of Strategic Environmental Assessment (SEA) Directive (2001/42/EC) in Turkey" to design a Prototype SEA approach for Turkey. The major originating point for the basis of this project is the EU SEA directive. The Directive provides a framework regarding the assessment of the effects of certain socio-economic and physical environmental plans and programs.

The purpose of the project is to develop institutional and legal infrastructure for the implementation of EU SEA Directive in Turkey. The Ministry of Environment (the name has changed as Ministry of Environment and Forestry with the combination of Ministry of Environment and Ministry of Forestry in 8 May 2003) is the beneficiary of the project and Planning Department/General Directorate of EIA and Planning is responsible from the implementation. The following project results are anticipated to be achieved:

- A Draft SEA Regulation prepared and implemented with a pilot project;

- An increased and strengthened institutional capacity within the Ministry of Environment and other relevant partners;

- A common understanding and knowledge of SEA created among relevant partners and stakeholders, for the improvement of collaboration;

- Knowledge on SEA and its implementation transferred to relevant parties involved in the implementation process of SEA procedures (also in other regions of Turkey);

- Increased public awareness on the need of SEA, improved access to information (for relevant stakeholders) and public participation

The partners of the project are the concerned parties, which are in the scope of EU SEA Directive. Therefore, the project has not been completed yet. It will prolong until December 2004. There is already a draft SEA legislation prepared and it is a good basis for a prototype.

There are two general meetings organised for all related institutions since the project had started. The initial one was to introduce the project to all related parties. The second one was on the presentation of the Draft SEA Regulation. There were also 11 sector groups created to work on each sector to describe the best approach to the process.

Draft regulation is prepared due to the expectation of the competent authorities. These authorities will be the implementers of the SEA process in the future. The implementation might fail, if an ownership had not been created amongst them.

Although, the opinions of the competent authorities were positive on the regulation, it was also hard to convince them on their responsibilities. The competent authorities were not willing to implement a second environmental assessment tool. They already had major critics on the EIA procedure and they were only accepting to implement the SEA process if necessary basis for the exception of EIA procedure for the SEA implemented areas.

The acceptation of SEA procedure in the national level was very low when considered with the local level. This was related with the fear of increasing costs and time in planning procedure and loosing their own control on the

process. The fears of the parties were taken into account during the design of Turkish SEA prototype, which is given in detail below.

5.3. Draft SEA Regulation

The reflection of current conditions of Turkey, experiences and lessons learned from the case studies and the contribution of the competent authorities were the major factors for the regulation that makes it unique.

The regulation is prepared especially with the help of two other legislative structures; EU SEA Directive, Turkish EIA Regulation. EU SEA Directive is a basis since it is the subject of adoption process. Turkish EIA Regulation is a result of 10 years EIA experience and creates a good basis for the Draft SEA regulation because of the similar processes and principles of SEA and EIA.

The general idea hides behind the regulation is to design a simple, applicable and flexible legal structure. The past experiences of EIA Regulation shows us, complex, detailed assessment processes seems to be good in theory but not in implementation.

The minimum requirements of the EU SEA Directive are included in the draft regulation. Therefore, the general structure was advisory rather than mandatory. The regulation was designed on the idea of training the competent authorities and the concerned public on the environmental priorities, teaching them how to integrate the environment into strategic decision making.

The power of the regulation is the participation of the NGOs and the professional groups to the process, their critics on the planning actions and the presentation of the whole process transparently in a written report.

Table 22: Comparison of EU SEA Directive and Turkish EIA System

EU SEA Directive	Proposed Turkish SEA	Turkish EIA
Screening; criteria are significance of impacts and case by case	Combination of short list and case by case screening for the rest	Combination of list and case by case screening; EIA preliminary research
	Start of SEA is made public in the announcement on possibility of stakeholders to be involved in the scoping	Start of EIA process is made public through announcement of public hearing on scoping
(Legal agency scopes)	Legal agency (planning authority) scopes but shall consult to the environmental authority (Ministry of Environment and Forestry) and public.	Environmental authority scopes; Ministry of Environment and Forestry coordinates expert body that advises on scope
Environment agencies are consulted	Environment agencies either consulted or in charge of scoping (see above)	Project owner pays additional cost of expert body/site visits/public hearing etc.
	Public involved in scoping; in all cases a selection of stakeholders (civil society, NGOs etc.); rest e.g. general public to be decided on case by case basis	Public involved in scoping through public hearing
(Planning authority prepares SEA)	Planning authority prepares SEA	Project owner prepares EIA
Alternative plans or programs are mandatory	Alternatives are mandatory including do nothing (zero-option)	Alternatives mandatory in preliminary EIA; always considered in scoping by commission in full EIA
Environment authority is consulted on quality of SEA	Environment Authority is responsible for quality control of SEA	Environment authority reviews quality of EIA; Ministry coordinates expert body that reviews EIA and gives advise in 30 days
Public involved in review of SEA and draft plan	Public involved in review of SEA and draft plan; should be the same as it is in scoping phase	Public involved in review; can send comments in 30 within days
Plan explains in writing how SEA was taken into account	Plan explains in writing how SEA was taken into account; planning authority has the final say for the plan and SEA; environment authority is fully consulted	Ministry of Environment and Forestry gives "EIA clearance" on environmental grounds. Can approve or not.
Monitoring is mandatory	Monitoring is mandatory	Monitoring is mandatory

5.3.1. Screening

The regulation states that; "Whether plans and programs not listed in Annex-I subject to SEA or not shall be decided by the competent authority. Within this framework, the competent authority shall identify whether SEA implementation is required for his plan or program or not considering the screening criteria given in Annex-II.

As and when deemed necessary by the competent authority, the competent authority may apply to the Ministry pertaining to whether his plan or program subject to SEA or not. The Ministry shall examine the data and documents in the application file according to the screening criteria given in Annex-II and shall notify the competent authority of the decision taken regarding whether the plan or program is subject to SEA or not. In this case the decision of the Ministry shall prevail." (Article 9)

A two-sided screening exists in the draft regulation. The plans and programmes that are stated in the Annex-I are directly in the scope of SEA implementation. The two-sided screening structure gives us opportunity of flexibility and easy implementation in the beginning. A flexible SEA screening phase is eligible for an initial stage and for further implementations. The plans and programmes that are stated in the Annex-I are directly in the scope of SEA implementation. The rest will be defined by Annex-II. To start with, limited number of plans and programs will be better approach than trying to implement SEA on all plans and programs. The second approach may create many problems in implementation origins from insufficient knowledge, expertise and infrastructure.

The past Turkish planning experience shows us a similar example. The municipalities gained power of preparing 1/5.000 and 1/1.000 scaled plans in 1984 with law numbered 3194. The idea was positive since the central

government shared her power with the local authorities. However, the local authorities could not use this legal power. Almost all municipalities were lacking in infrastructure, human capital, knowledge and expertise. The result of this sudden implementation was not successful.

When starting to a new process SEA, which is directly related with the authorities who are also planning authorities (ministries, institutions, municipalities), it is still discussed that a sudden widespread implementation may be a mistake. A systematic approach will be positive. In the future, screening list might be widened due to the dissemination of knowledge, increase in human capital and infrastructure in institutions and needs.

The 1/25.000 and 1/5.000 scaled plans are subject to SEA according to Annex-I. If an SEA is executed in a particular area on 1/25.000 scaled plans, there is no need to execute another study in 1/5.000 scale. This is to prevent duplication.

1/25.000 scaled territorial plans are subject to SEA because of their strategic nature. The most important item in the screening list is these plans since they are implemented in all over the country and they assess not only the possible effects of one sector, but also the combination of all sectors. The rest of the list is formed by master plans prepared in different sectors. The regulation and its annexes are almost prepared according to this priority.

5.3.2. Scoping

SEA process is clearly defined in detail. The data that will be collected, the content o the SEA Report, the methods that will be used for assessment, the public participation process and plan/program alternatives are described in this phase.

The regulation states that; ‘The competent authority must consult to the Ministry and public during the scoping studies where the special format for the SEA Report shall be determined. Within this framework, the competent authority shall organize the scoping meeting with the participation of representatives of related institutions and organizations identified by the competent authority according to contents of the plan or program,” (Article 10)

As it is stated above the competent (planning) authority is responsible from this phase but has to consult to Ministry of Environment and Forestry and public. The participation of the public is according to the contents of the plan or program. This might be simply told as; as the strategic level or scale or the plan or program increases, the public groups to be consulted are professionalized. This is directly interested with the Turkey’s priorities and needs. The time schedule can not be prolonged too much by SEA because of economic reasons.

The scope of report is described as a result of these studies; ‘The competent authority shall determine the SEA Report format by finalizing the draft scoping document considering the views stated in the scoping and public participation meetings.” (Article 10)

The scoping meeting is a very good example of access to information. As the territorial plans are subject to strategic decisions, the public that will be invited to the public participation meeting should be professional groups as NGOs, chambers, and universities. This idea is also supported with the current political, social structures of Turkey. This may prevent the land speculation in the planning area.

5.3.3. Public Participation

'One of the major problems of the Turkish planning system can be stated as absence of the efficient participation of the affected public and the support of these groups into the planning process, which will be the real owners of the plan" (Dünya Şehircilik Günü, 2003). SEA can also contribute to the existing planning system with its participatory and transparent structure. For the organisation of the public participation meeting the regulation states that;

'The public participation meeting shall be held by the competent authority in line with the conditions set forth in the scoping meeting beforehand.

Representative of the Ministry shall participate to the public participation meeting. The secretarial functions regarding the public participation meeting shall be conducted by the competent authority." (Article 11)

The early-described public representatives and a representative from the Ministry of Environment and Forestry will participate to the process and give their opinions on the proposed SEA procedure and plan alternatives. The competent (planning) authority will be responsible for organising the meeting. A representative from Ministry of Environment and Forestry will participate to the meeting and will observe the meeting. Here, there is no legal power, which is directly given to the environmental authority. Ministry of Environment and Forestry will be responsible to observe the meeting and give opinions. The opinions of the participants shall be taken into account by the planning authority.

The participation of the concerned parties to the process will create an opportunity for the integration of local knowledge and expertise; will support the ownership for the proposed planning or programming process at the earliest stage.

5.3.4. Quality Control

Quality control stage is designed for the review of the SEA Report and the SEA process. After completion of scoping phase, a SEA Report is prepared, including plan alternatives and their assessments. A SEA Report should be consisting of items below according to Annex-III of the Draft Regulation,

Scope, objectives of the plan or program and relationship with other relevant plans and programs

- Current state of the environmental and the likely evolution of this environment without implementation of the plan or program (do nothing case);

- The environmental characteristics of areas likely to be significantly affected;

- Existing environmental problems arising from the plan or program, its relationship with any environmental protection areas or sensitive areas (listed in Annex-IV);

- The likely significant effects of the plan or program on the environment, including biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between the above factors, (these effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);

- The measures envisaged to prevent, reduce and as fully as possible eliminate entirely any significant adverse effects on the environment of implementing the plan or program;

- The alternatives of the plan or program and taking into consideration of these with their effects on environment. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken, any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;

- Main outline of the public participation meeting (its place, date, participants), the opinions expressed in this meeting and how these opinions considered in the evaluation within the final version of the plan or program;

- A description of the measures envisaged concerning monitoring of the environmental impacts those may arise during the implementation of the plan or program;
- A non-technical summary of the information provided under the above headings.

These items in Annex-III are directly taken from EU SEA Directive since they sustain all the requirements.

At least "do nothing" alternative is mandatory. The idea is still di scussed that an "environmental friendly" alternative should be existed too. For many reasons, usually plan alternatives are not produced. This approach carries a major importance for Turkish planning process. SEA will be a very useful tool for planning process. If this idea is realised, at least three alternatives will be produced for every plan. The production of these alternatives will create a good basis for sustainable development. The public, environmental authority and the planning authority will be able to see the results of the popular alternative by comparing this alternative with the "do nothing" and "environment friendly" alternative.

The "environment friendly" alternative does not mean a fully environmental look to the plan. It does not mean to not build any industrial or agricultural facilities on the area but to be highly sensitive to the ecological balances and environmental, historical and cultural protection, what ever it costs in finance. A good example may be construction of a railroad. If the railroad passes around a cultural, historical or natural site, rather than passing inside, this is "environmental friendly alternative". The cost may increase with this alternative. This alternative gives us a chance to compare the actions and their financial, environmental costs and find the balance between them. The second use of this alternative is a main aim for SEA; training the responsible agencies. Making environmental friendly alternative mandatory, ensures learning by doing process for the planning authorities. Producing this alternative will teach them the environmental priorities and will lead a comparison chance.

The assessments of the alternative plans are included in SEA Report. The competent authority prepares the report and submits to the Ministry of Environment and Forestry. The Ministry shall inspect and evaluate:

- whether the SEA Report and its annexes are adequate and appropriate in support of the decision making,
- whether the examinations, calculations and evaluations have been based on adequate data, information and documentation,
- whether the possible impacts of the plan or program, as well as its alternatives, on the environment have been thoroughly assessed,
- whether necessary mitigation measures have been determined to eliminate the possible adverse impacts on the environment,
- whether alternatives have been sufficiently examined,

- whether the scoping studies and the public participation meeting therein have been held duly and properly, and whether the opinions arose in these meetings have been sufficiently assessed within the SEA report,
- whether the public participation meeting has been held duly and properly, and whether sufficient solutions have been brought to the matters dwelled on in the public participation meeting,
- whether issues stated in Annex-III have been sufficiently considered.

5.3.5. Monitoring

This is an important stage for the process since the implementation and the results of the proposed activities, their impacts on the environment, the success level on the environmental targets can only be observed by monitoring. However, it is hard to monitor and control planning activities in Turkey for many reasons.

The regulation states that;

'The competent authority shall be obligated:

to submit the plan or program as approved/accepted (as well as) together with the information report stating how SEA Report have been assessed within the decision making process and monitoring program to the Ministry, and to inform the public and other related institutions and organizations participated to the SEA process on the issues stated in paragraph (a) of this Article.

The monitoring program shall be prepared to identify at an early stage significant adverse environmental effects that may arise during the implementation of the plan or program, and to be able to undertake prompt appropriate remedial actions against these effects.

The planning authority is responsible from monitoring. The tools of monitoring are commonly used legal measurements and punishments. a new way of approach should be developed."

The figures describing the SEA procedure and the roles of the authorities are given below;

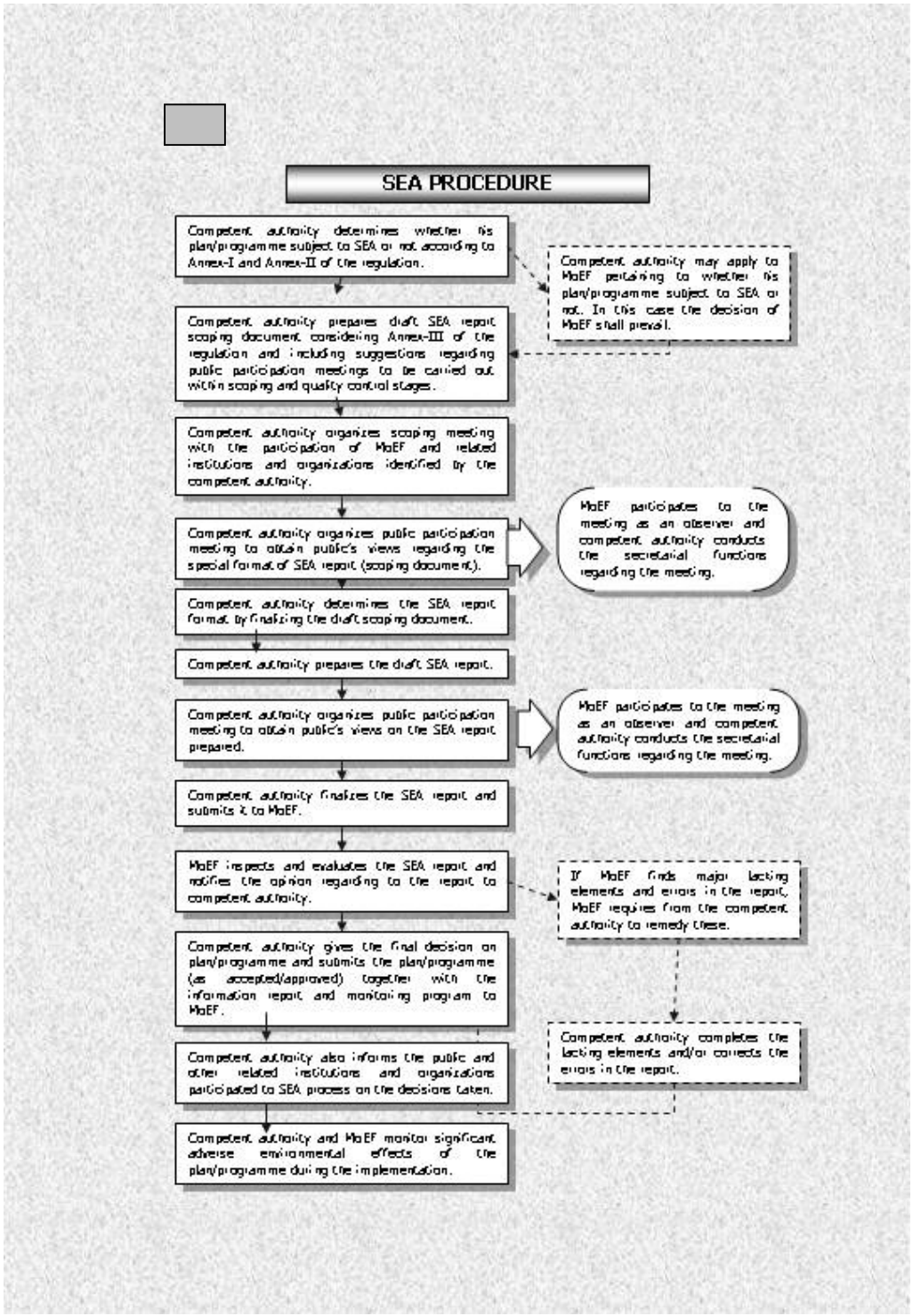


Figure 3: SEA Procedure of Draft SEA Regulation

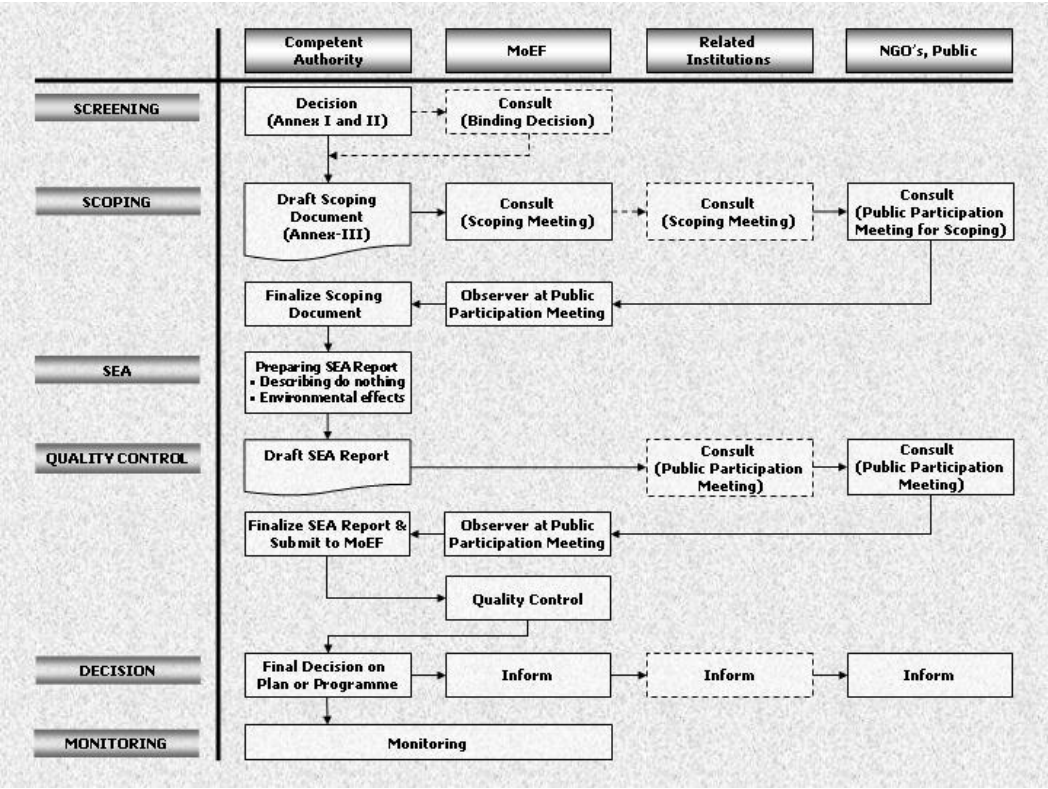


Figure 4: Responsibilities of the Authorities in SEA Process

CHAPTER 5

CONCLUSION

An integrated structure with planning and SEA is observed to be a good solution for the environmental problems that occur during the development process. SEA -by itself- is not sufficient to solve the problems. "Most practitioners view SEA as a decision-aiding rather than a decision-making process" (Dalal, Clayton, Sadler, 1999).

Plans, with their strategic importance, carry out an environmental approach. However, the integration of SEA brought standardization to the planning process. Environmental consequences, as a component of the plan were directly taken as a priority. In addition to those facts, SEA considered economic and social consequences of the plans and programmes (e.g. Çanakkale experience) either.

Some obstacles may reduce the success of future implementation of SEA in Turkey. SEA is an enhancement tool for planning process, in addition to its environmental assessment role. If the planning side remains weak, SEA might remain as a weak enhancement tool.

6.1. SEA in Worldwide

Comparison between the developed countries and the developing countries on SEA had several outputs. Most of the developed countries are on the way to operate their own SEA processes whereas the subject is still a big dilemma for the developing countries.

Turkey is one of the developing countries but EIA and SEA are best practiced in Turkey amongst other developing countries. Turkey has several institutional and administrative similarities with these countries. Same similarity exists with the EU countries in many cases. Both, approaches of the developing countries and the EU should be taken into account when constructing a SEA process in Turkey.

6.2. Çanakkale Pilot Project

Çanakkale pilot is a welcome stage for SEA and its particular interest is integration of SEA with territory plans. Public participation and coordination created between institutions and the use of local knowledge were major success indicators for this process.

Key foundations of Turkey's public participation model are based on Çanakkale experience. Local branches of state institutions, NGOs, university members, chambers and unions were the core groups of the public participation meetings. Therefore, expert groups evaluated strategic level decisions.

Coordination created between the state institutions gave acceleration to the planning process. Their contribution was very high in local level and was a very crucial output for the prototype SEA approach. SEA process had created a consensus environment, which current planning system could not.

However, the situation was not the same at the national level. The following Turkish SEA practice (Antalya Pilot and the regulation process) had shown that the planning authorities were not willingness for transparency.

SEA strengthened role of concerned public in planning process and enhanced strategic decisions, which are given by planners. It was a "public friendly" process and allowed the integration of local knowledge and capacity in planning activity. Participation also created an ownership on the planning activity.

Level of public participation was very suitable. Only representatives of the concerned groups participated to SEA process. Participation of the public was provided at "public participation meeting", which was realised at the last stage of the planning process, before giving the last decision. This experience leaded prototype SEA approach and the level of public participation is easily defined.

Lack of suitable data and the absence of alternative plans were major missing points in the Çanakkale pilot. This situation indicated that, suitable data and existence of alternatives have a great impact on the success of SEA process. Therefore, a well designed and strong planning process increases the success of SEA.

There was not an existing real plan revision decision for the pilot and this affected the success of the project. If a real revision had existed, this would push the project group to be more concentrated on real planning decisions and assessment of more reasonable planning decisions would be provided.

Çanakkale experience carries out the origin of the idea that Turkey should integrate with SEA process. Many of initial ideas have changed today and many of them have remained as key foundations of our understanding of SEA for Turkey.

6.3. Draft SEA Regulation

A Draft SEA Regulation for Turkey has already been prepared and the discussion over the version is still going on. The Draft Regulation describes a prototype SEA approach for Turkey and consists of screening, scoping, public participation, SEA report and reviewing, decision-making and monitoring steps.

Screening step is consisting of a list and a case-by-case approach. SEA procedure is mandatory for limited number of plans and programs according to the list given in Annex-1 of the Draft SEA Regulation. The idea that limits the number of plans and programmes is to increase the efficiency of the implementation in initial years. Therefore, SEA capacity inside the competent authorities to apply the SEA procedure has not been build yet. During the design phase, it is observed that there is a crucial need for awareness rising, training and capacity building facilities inside these institutions.

Scoping phase is both beneficial for competent authority and public. Consulting to the environmental authority and public in scoping phase is mandatory for the decision-maker. However, decision-maker has the right to define the level of the public group to be consulted during the SEA process. Rest of the SEA process is defined at this stage. Therefore, quality control will be realised according to the information given in scoping report.

Environmental authority and public is directly consulted at two stages; scoping and quality review. They have the right to give their critics on the planning, programming decisions and assessment process. The competent authority should clearly describe how their opinions are taken into account during the process. The "last word" is always giv en to the competent authority in the draft regulation.

However, power of the regulation takes its origins from the transparency on the planning decisions that is created by the public participation. The decision-maker is free to give its own decision but also has to include the critics on the decision and how they are evaluated, in the SEA report. Transparency on the planning decisions that is created by the SEA procedure is the most important contribution of SEA on the planning system.

Comparison between the alternative plans or programmes is one of the basic ideas of SEA. Turkish SEA prototype integrates a mandatory alternative; "do nothing alternative" into the current planning process. This is at least for having an opportunity to compare the favourite alternative with the situation that we do nothing. It is still discussed that the "environmental friendly" alternative should also be mandatory but this idea has not been realised in the Draft SEA Regulation yet.

There are additional benefits of SEA process as SWOT analysis, environmental assessment matrixes, other environmental assessment techniques, which are easy to apply, and very useful techniques. They might provide standard approaches for the different planning approaches. SEA might also be helpful to bring standardization to the Turkish planning process for the methods used.

Many approaches have been discussed during the design phase of draft regulation. Some ideas from the Ministry side occurred, which argued that SEA should be applied as a permitting process in Turkey like EIA. This had been ignored because it was a conflict with the democratic manner of SEA and it would cause a high degree of rejection amongst the competent authorities. Therefore, it was aimed to build a consensus on the regulation. The "last word" on the decision- making process belongs to the competent authority.

SEA prototype of Turkey is a result of consensus of all related parties. However, contribution of the competent authorities for the design phase is limited because their knowledge was nor sufficient on the subject. This factor may affect the success of the regulation.

SEA regulation is a democratic, transparent and flexible process rather than a mandatory process. The power of the process relies to democratic rights of the public and mass media. The reports of the SEA process will be accessible and the decisions might be criticized in every area (TV, newspapers, courts etc.). This will probably push the decision-maker to consider the consequences of its decision even there is no direct legal obligation on the decision.

However, the measures and the audit mechanisms are not described in the regulation yet. It is still not clear what the penalties are, if the decision makers do not obey the provisions of the regulations. This might be an obstacle for the implementation of the regulation.

There are also some other aspects that might hinder the success of the regulation. As it is said before, SEA is an enhancement tool for the strategic level planning activities. However, the content of current planning experiences at strategic level in Turkey are not sufficient to be "strategic level" decisions. Many legal responsibilities exist to prepare regional plans, master plans on

different sectors but they are not prepared (e.g. railway master plans, regional plans). This situation may lead the assessment of non-strategic decisions with SEA.

There are many opinions of the experts in Turkey that 1/25.000 scaled territory plans are not the stage that strategic level decisions are given. Nevertheless, they are also the highest scale of widespread implementation in physical planning and they should be subject to SEA implementations until higher scales of strategic level decisions are regularly experienced in our country.

Implementation plans that are prepared in 1/5000 scale by the municipalities are not in the scope of regulation yet. This will probably limit the implementation area. However, it is also discussed that SEA should be implemented to 1/5000 scaled plans which are prepared at the locations that no territory plan exist.

In addition to these facts, draft regulation is also applicable since it does not bring major time and money costs to the planning procedure. It starts when the planning process starts and ends with the planning process. It has given right to the competent authority to give up when the problem is very hard to solve and to try easier ways to find the solution. Therefore, it also requires the reason of this action, which should be stated in the SEA report.

Finally, Turkish SEA approach is still a prototype. There is a crucial need for capacity building facilities inside the institutions before the enforcement of the regulation. This is both necessary to review the draft regulation together with competent authorities whom have sufficient knowledge on the subject and for healthy future implementation.

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