MSc Program Environmental Technology & International Affairs

Scope and Differentiation of EIA and SEA

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"Master of Science"

supervised by
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Affidavit

I, **CLEMENS MATZER**, hereby declare

1. that I am the sole author of the present Master's Thesis, "SCOPE AND DIFFERENTIATION OF EIA AND SEA", 68 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

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Abstract

The Strategic Environmental Impact Assessment Directive entered into force in 2001, and was conceived to enhance the assessment process and to guarantee environmental protection from the very beginning of the planning stage. However, the EIA and SEA Directive are formulated in such a way that overlaps are inevitable. One might think that some overlapping areas would not pose a major problem, but in practice the confusion about the application of one or the other assessment method reduces the legal certainty of all three key players: the developer of a project, the assessing authority and the public. Member States are dealing differently with that overlap issue, since an EU Directive only stipulates the overall goal, towards which the entire European Union is supposed to be striving, but it leaves the choice of measures for implementation to the Member States. On that account one can find a number of different environmental assessment methods in the European Union: Joint procedures, simultaneous procedures, some Member States even opt only for one assessment method and risk deliberately non-compliance with the Directive of the other evaluation method. In this Master Thesis a completely new approach is provided combining an enhanced SEA, a joint procedure between SEA and EIA, and an EIA, which is capable to deal with the displayed set of problems and to provide a common procedure that is applicable throughout European Member States. This method allows for harmonisation of environmental assessments without altering the Directives. It is of particular importance that legal uncertainty and duplication of processes would be prevented, if the developed approach was implemented in all EU Member States. Pleasant side effect would be the increased transparency of the decision-making process and the comparability across all Member States.

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0. Introduction

From the Roman Empire, over the Industrial Revolution to our post-industrial economy, economic growth and prosperity have always entailed environmental degradation and depletion of resources. Hardly surprising that the Earth's shape and its chemical composition have been altered during this time and that scientists nowadays speak of the Anthropocene - the age bearing the impress of human beings.

It was only during the past 40 years that people began to notice that their intervention in environmental integrity has to be kept within bounds. For that reason, Environmental Impact Assessments were introduced in order to ensure the preservation of the environment and to reduce environmental impacts to a minimum. The USA were the first nation that implemented such an assessment. The European Communities followed only in 1985, when the Environmental Impact Assessment Directive was adopted.

The Strategic Environmental Impact Assessment Directive was adopted 16 years later, in 2001, in order to enhance the assessment process and to guarantee environmental protection from the very beginning of the planning stage. However, the two Directives are formulated in such a way that overlaps are inevitable. One might think that some overlapping areas would not pose a major problem, but in practice the confusion about the application of one or the other assessment method reduces the legal certainty of all three key players: the developer of a project, the assessing authority and the public.

Member States are dealing differently with that overlap issue, since an EU Directive only stipulates the overall goal, towards which the entire European Union is supposed to be striving, but it leaves the choice of measures for implementation to the Member States. On that account one can find a number of different environmental assessment methods in the European Union: Joint procedures, simultaneous procedures, some Member States even opt only for one assessment method and risk deliberately non-compliance with the Directive of the other evaluation method.

For that reason, this master thesis aims at investigating the scope, differences and the overlapping areas of the two Directives in order to propose eventually with a new procedure that might resolve the set problems.

1. The history of European environmental impact assessment at a glance

The environmental impact assessment represents a crucial instrument in order to prevent adverse and harmful effects to human beings and to the environment. Nowadays, it does not only appear as a significant component in the legislation of the European Union, but in the legislation of almost all countries in the world. Astonishingly enough, not the old continent can boast to be the pioneer in that field, but the USA.

The National Environmental Policy Act was signed into law in the USA in 1970 following growing ecological and environmental concerns of the population. The purposes of this act were:

- "*To declare a national policy which will encourage productive and enjoyable harmony between man and his environment;*
- *to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man;*
- *to enrich the understanding of the ecological systems and natural resources important to the Nation;*
- *and to establish a Council on Environmental Quality"* (NEPA, 1969).

However, most important was the implementation of a new modus procedendi for the assessment of activities of federal agencies involving environmental assessments and the preparation of environmental impact statements.

The development of such an instrument took much longer on the other side of the Atlantic Ocean where the awareness about the importance of the role of environmental impact assessment developed only hesitantly. Only when the European Commission noticed that the various environmental quality standards and assessment methods applied by the member states had been leading to growing competitive distortion across the European Community, it became active.

In 1977, after several intensive discussions, the European Commission started analysing the field by commissioning several studies (e.g. Lee and Wood, 1977). Based on those research results the European Commission decided to implement gradually the environmental impact assessment: Initially on the project level and later on the plan and programme level.

Eventually, in 1985, the Environmental Assessment Directive 85/337/EC entered into force and laid the foundation for the harmonization of environmental quality standards and the protection of human beings on the European level. Even though this Directive can be considered a milestone in the field of environmental protection it was anything but particularly strict or revolutionary. This fact had resulted from the omission of any reference to the environment in the Treaty of Rome. For that reason, only some specific articles requiring unanimity could be used in order to adopt the Environmental Assessment Directive. The outcome was a weak document stipulating relatively low common environmental standards acceptable for all parties and leaving a lot of room for manoeuvre to the member states (Bond and Wathern, 1999).

It took a while until the European Commission recognised that the sole application of environmental impact assessment on the project level did not achieve the desired result of a comprehensive evaluation of potential impacts. Particularly the report by the European Commission from 1993 about the implementation of the Environmental Impact Assessment Directive revealed that the evaluation of potential impacts had to be conducted on an earlier stage, since potentially harmful decisions would have already been taken before the environmental impact assessment can be performed (e.g. only a few options for the project and the location are taken into account).

As a consequence, several proposals for a Strategic Environmental Assessment Directive were prepared and discussed in order to extend the scope to the programme and policy level. From 1996 until 1999, a draft was negotiated and finally, in 2000, by the EU environment ministers adopted. In 2001, the Strategic Environmental Assessment Directive 2001/42/EC entered into force and the deadline for the implementation into national law of the member states expired in 2004.

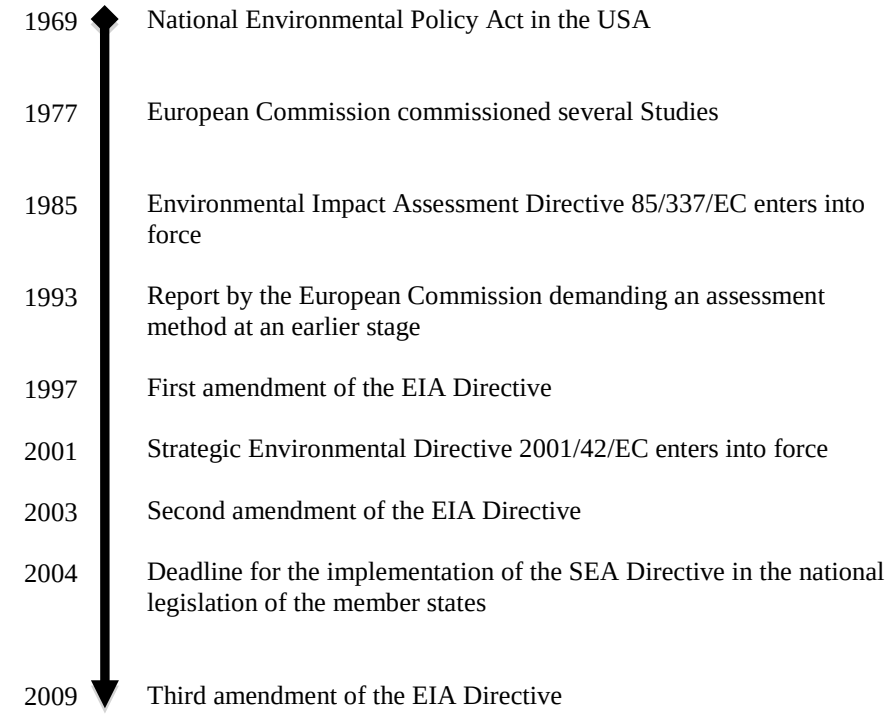
On the other hand, the Environmental Impact Assessment Directive was several times amended in order to bring it in line with other international instruments:

- Directive 97/11/EC:
    - Extension of the number of projects considered.
    - Extension of the number of projects for which environmental impact assessment is obligatory.
    - Determination of minimum information required for the report

- Harmonisation with the UNECE Espoo Convention

- Directive 2003/35/EC:
  - Harmonisation with the Aarhus Convention concerning public participation
- Directive 2009/31/EC:
  - Additional projects related to Carbon capture and storage (CCS) were included

Figure 1 - Timeline of the Environmental Impact Assessment



2. Scope of EIA and SEA Directive

The development of a common framework for environmental impact assessment took several decades, yet the adopted directives are still under constant revision, since environmental issues became essential and environmental protection found its way into European legislation. The EIA and SEA Directives both play a crucial role in the balancing of economic ambition and the protection of the environment. Therefore, the tasks, purposes and contents are presented in detail, so that the scope of functions of the two directives can be differentiated more easily.

2.1. Environmental Impact Assessment Directive

When all member states agreed on a common paper the environmental impact assessment was incorporated into European legislation by using the directive as a legal instrument in accordance with article 249 of the EC Treaty: *"A directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods"* (Art. 249 EC Treaty). Owing to the directive as a legal instrument the individual environmental impact assessment procedures vary strongly throughout the member states. However, member states are obliged to implement European directives in the most efficient way, which bolsters at least a minimum of harmonisation.

2.1.1. Purpose

The EIA Directive was primarily adopted in order to provide a common, early stage assessment method that evaluates likely significant effects on the environment caused by certain types of projects. This approach reflects the idea of the precautionary principle, which can be interpreted as the pursuit of the European Union to prevent rather than counteract the creation of pollution or other harm to the environment.

Therefore article 2(1) states: *"[…] projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development and assessment with regard to their effects […]"* (EIA Directive, art. 2(1)).

Additionally, the EIA Directive states explicitly the purpose of the directive in article 3: *"The environmental impact assessment shall **identify**, **describe** and **assess** […] the **direct** and **indirect effects** of a project on the following factors:*

- *human beings, fauna and flora*
- *soil, water, air, climate and the landscape;*
- *material assets and the cultural heritage;*
- *the interaction between the factors mentioned in the first, second and third indents"* (EIA Directive, Art. 3).

Furthermore, the environmental impact assessment should make available all necessary information to the decision makers so that they can base their considerations on a comprehensive document. This ensures a more transparent decision-making process and contributes to the aspiration for sustainable development.

However, one should not ignore that the distortion of the common market by different environmental quality standards was another animating spirit for the implementation of the environmental impact assessment. This fact is also briefly mentioned in the preamble of the EIA directive stating: *"[…] disparities between the laws in force in the various Member States with regard to the assessment of the environmental effects of public and private projects may create unfavourable competitive conditions and thereby directly affect the functioning of the common market; […]"* (EIA Directive, preamble).

2.1.2. Projects

The term "project" is the key element of the EIA Directive around which everything revolves. In the case of this Directive "project" means:

- *"the execution of construction works or of other installations or schemes,*
- *other interventions in the natural surroundings and landscape including those involving extraction of mineral resources"* (EIA Directive, art. 1(2)).

Additionally, the directive provides two annexes (I and II) listing the various types of projects (e.g. crude-oil refineries, installations for the enrichment of nuclear fuel or intensive fish farming) for which the environmental impact assessment may be obligatory. If a project

falls into Annex I, an environmental impact assessment will be conducted according to article 4(1) of the EIA Directive. Therefore, Annex I projects are relatively easily classified and should not cause major difficulties.

However, the situation appears differently when considering Annex II projects (e.g. water management projects, underground mining, surface storage of fossil fuels,…). In this case article 4(2) hands the responsibility over to the Member States, which on the one hand have the possibility to set thresholds or criteria, or, on the other hand, to examine each case individually. Yet, the EIA Directive provides additionally a third annex containing the relevant selection criteria. These selection criteria have to be taken into account, when thresholds or criteria are to be set. Three criteria groups must be considered: Characteristics of the project, location and characteristics of the potential impacts.[1]
Owing to the very complex screening process, which is necessary prior to the setting of thresholds and criteria, this issue is a very frequent reason for litigations brought before the European Court of Justice.

In addition, the ECJ also addressed the set of problems arising by salami-slicing. Here large projects are split into several sub-projects of which not a single one would require an environmental impact assessment. In the case Commission v. Spain (C-227/01) the ECJ supported the opinion that such a proceeding would be illegitimate.

Moreover the term “installations” is not described in the EIA Directive and there is so far no ruling of the ECJ existing that would provide a more detailed explanation. In fact the IPPC Directive delivers a definition, but it is not deemed to be applicable to the EIA Directive (European Commission, 2008).

As one may notice the term is broadly defined, which makes it indispensable to take into account the interpretations and rulings of the European Court of Justice. In other words some principles can be derived from the ECJ rulings (European Commission 2008):

[1] A good example for the pitfalls in the threshold setting process is the Kraaijveld and others case (C-72/95) of the European Court of Justice. This case is about the environmental impact assessment obligation of dike projects in the Netherlands. The Dutch authorities set the thresholds in such a way that all dike projects were generally exempted from the assessment. The European Court of Justice decided against the Netherlands and stated that Member States overshot their margin of discretion (European Court of Justice, 1996).

- Wide scope and broad purpose
- Uniform interpretation of differing language versions
- Exclusion of salami-slicing

2.1.3. Exemptions

The EIA Directive provides for the possibility to exempt certain projects from the environmental impact assessment. *"Member States may, in exceptional cases, exempt a specific project in whole or in part from the provisions laid down in this Directive"* (EIA Directive, art. 2(3)). On the one hand the respective Member State may decide on a case-by-case basis whether the project in question is deemed indispensable for the national defence strategy in accordance with article 1(4). On the other hand the EIA Directive does not apply if a specific act of national legislation had to be adopted for the realization of the project concerned (art. 1(5)).

If a Member State invokes the exemption clause, it will have to adhere to the procedure stated in article 7: The Member State must evaluate whether another assessment method would be more appropriate for the project in question. It must deliver information to the public about the reasons for granting the exemption[2] and about other forms of assessment, and it must finally inform the European Commission about its decision before it approves of the project.

Although the term "exceptional cases" is not specified more precisely, it can be inferred that three prerequisites must be fulfilled so that a certain project can be classified as an exceptional case:

1. A certain need makes the realisation of the project essential. That would be the case if, for instance, human health was at stake and the project in question was an appropriate remedy.
2. An unforeseeable emergency makes the realisation of the project urgently necessary and the project could not have been undertaken earlier. If the project had been sooner realisable, the environmental impact assessment would have been feasible and the developer would have been able to adhere to the provisions of the EIA Directive.

[2] This paragraph was included to bring the EIA Directive in line with the Convention on access to information, public participation in decision-making and access to justice in environmental matters - the Aarhus Convention.

3. It would be generally impossible to abide by the EIA Directive provisions. For example, if the project had to be realised so quickly, that it would be simply impossible to concede the stipulated timeframe to the public to review and respond to the information shared.

Besides, the Commission is required to forward the received documents immediately to the other Member States and to report annually about the invoking of article 7. Moreover, all exemptions are to be interpreted and applied in a very narrow sense. They have to be very detailed, so that no general exemption can be deduced, sufficient public participation must be guaranteed and the goals of the Directive must not be infringed[3].

2.1.4. Minimum standards for information

If projects are subject to environmental impact assessment according to article 4, the EIA Directive will commit the Developer of a project to compile all necessary information and to submit it to the designated authorities. In the context of the Directive the developer is *"the applicant for authorization for a private project or the public authority which initiates a project"* (EIA Directive, art. 1(2)). This information must satisfy certain standards, which are stated both in article 5(3) and in Annex IV in order to give the competent authorities sufficient knowledge not only about the characteristics of the project, but also about the assessment method applied.

An overall assessment of the project in question requires the consideration of direct and indirect effects. Therefore, the developer is committed to submit the following minimum information to the competent authority (EIA Directive, art. 5(3)):

- the size, site and design of the project
- the planned measures in order to cope with adverse effects
- sufficiently detailed data about potential impacts on the environment
- the most appropriate options
- justification of the choice of option
- composition of a non-technical summary

[3] The ECJ decided in the judgement of the case World Wildlife Fund (WWF) v. Province of Bozen that an airport which is enlarged for civil reasons but which fulfils also military purposes, cannot fall under the national defence exemption of article 1(5) (European Court of Justice, 1999).

- a list of problems that have arisen in the course of the compilation process

Additionally, the Member States have to ensure that all authorities, which have information available that is related to the project concerned, are obliged to grant access to the developer. Moreover, the developer may also ask the responsible authority to prepare a statement, in which the opinion of the authority is laid down. In the course of this preparation, the authority on its part may consult the developer in order to obtain the information required to deal with that task. Finally, annex IV gives more helpful advice for the compilation of the information.

The gathered information represents the basis on which the competent authority decides about the approval of the project. In the context of the EIA Directive, approval is defined as "development consent": *"the decision of the competent authority or authorities which entitles the developer to proceed with the project"* (EIA Directive, art. 1(2)).

The stipulated minimum information in the Directive has two purposes: First of all, it ensures that the environmental impacts of a project are looked at from different angles in order to obtain a comprehensive view on the project and its effects. Secondly, the minimum information contributes to the harmonisation of the different European environmental standards. Eventually, it also allows comparing projects, their characteristics and the constraints imposed by the authorities across the European Union.

2.1.5. Public Participation / Transparency / Transboundary Impact

In 1997 and 2003, the EIA Directive was brought in line with the Convention on environmental impact assessment in a transboundary context (Espoo Convention, 1991) and with the Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention, 1998). Therefore, the EIA Directive ensures that both the public of the Member State performing the project and the public of the Member State that is likely to be affected is integrated in the decision-making process.

Most important in this regard is article 6(2) of the Directive, which states that the public has to be informed at an early stage of the decision-making process and no later than it takes to

provide reasonable information. This provision ensures that the public can participate from the very beginning in the decision-making process. Furthermore, the public concerned should be able to state its opinion and submit comments when all options are still discussed.

For that reason the public must be informed within a reasonable timeframe about the request for development consent, a potential transboundary impact, the envisaged time schedule and the complete information compiled under article 5.The Member States are in charge to set the above mentioned reasonable time frame and they have to consider article 6(6) in this respect: *"Reasonable timeframes for the different phases shall be provided, allowing sufficient time for informing the public and for the public concerned to prepare and participate effectively in environmental decision-making subject to the provisions of this Article"* (EIA Directive, art. 6(6)).

At the same moment when the own public is provided with the required information by the initiator state, the public concerned of the Member State(s), which are likely to be affected, shall be informed, too. The affected Member State must have enough time at its disposal to respond to the envisaged project in order to decide whether it will enter into consultations[4] with the Initiator Member State. In addition, the Initiator Member State must provide information about the planned measures to avoid or reduce the transboundary impact.

Moreover, the Directive clearly distinguishes between "public" and "public concerned", since the public merely receives information about the envisaged project, whilst the public concerned can also participate in the decision-making process. The public concerned is granted wide access to justice to support its role in the environmental impact assessment process and non-governmental organisations are also deemed to belong to the public concerned in order to guarantee an open and transparent dialogue.

2.1.6. Environmental Impact Assessment Procedure

The EIA Directive provides a common framework for the environmental impact assessment, yet the national procedures may differ strongly across the Member States. For instance, the

[4] Consultations are to be considered a kind of information sharing between states in international law. Although the affected State may strongly oppose the envisaged project it can only try to convince the Initiator State to refrain from performing the project, but it cannot really influence the decision-making process. Therefore, consultations have to be distinguished from the term participation.

setting of threshold values or the creation of mandatory lists fall into the responsibility of the respective Member State and can therefore vary. Nevertheless, a common modus operandi can be identified that ensures that the three actors (developer, competent authority and public) abide by the rules of engagement.

The environmental impact assessment comprises of several steps, whereas the most important ones are: Screening, Scoping, Preparation and Submission of the Environmental Impact Statement (EIS), and Consultation with the public or other interested parties.

When a developer has decided to undertake a project, it is necessary to determine if the project in question is subjected to an environmental impact assessment. This action is known as the screening procedure.

2.1.6.1. Screening

In some Member States the Screening process is initiated by notifying the competent authority in advance about the intention to apply for development consent. In other Member States this notification is not required and the Screening starts simply by the submission of the application for development consent (Sheate et al., 2004).

Subsequently, the competent authority is in charge to determine if the project under consideration can be expected to have significant effects on the environment. For that purpose the authority has the following evaluation procedure at its hand (European Commission, 2001a).

First of all, it has to be checked whether the project concerned is listed under Annex I or Annex II[5] or whether the project is likely to have effects on sites covered by the Habitat Directive (92/43/EEC) or the Conservation of wild birds Directive (79/409/EEC)[6]. If this examination comes to a negative conclusion an environmental impact assessment will not be required.

[5] Annex I contains all projects for which an EIA is mandatory. Annex II comprises all types of projects for which the Member States have to decide by setting thresholds and/or criteria, or by conducting case-by-case examinations whether EIA is required.

[6] The EIA Directive refers in Annex III to sites where not only Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora but also Directive 79/498/EEC on the conservation of wild birds apply. The latter one represents the oldest EU legislation on environmental issues.

- If the project under scrutiny belongs to Annex I, an Environmental Impact Assessment will be necessary without any doubt.
- If a project might affect sites listed in the Habitat or the Conservation of wild birds Directive, an EIA will have to be carried out.
- Is the project listed in Annex II, the competent authority will have to verify whether the characteristics of the project exceed certain threshold values or whether the project fulfils certain criteria set out by the Member States, which make the assessment necessary. If this is the case, the EIA will be required and the project belongs to the "mandatory list" (European Commission, 2001a).
- As a further possibility, likely significant effects might be determined in a case-by-case examination, which represents the most time consuming method. The criteria of Annex III are to be taken into account and national legislation and guidance must be considered.

Moreover, the developer may be invited by the competent authority to provide useful information and to enter into consultations with the authority. Moreover, the authority may ask experts, the public or other authorities to comment on the project in order to ensure a fruitful dialogue (Wood, 2003). The last step of the screening procedure is the announcement of the decision and its recording.

To sum up, threshold values and criteria seem to be the more appropriate measure to provide a clear and easily understandable framework, which allows for maximum transparency. This gives both the developer and the authority more certainty for their activities. On the other hand, case-by-case examinations are sometimes indispensable, because of the high complexity of projects or the application of new technologies, for which no threshold values have been stipulated hitherto.[7]

2.1.6.2. Scoping

The scoping procedure, although not mandatory in all Member States, is intended to detect the necessary areas, which have to be covered by an EIA and by the environmental

[7] In practice, 37,000 environmental impact assessments are conducted per year within the 27 EU Member States. The number of screenings performed per year varies from State to State and depends on the transposition of the EIA Directive into national legislation. For instance, in the period from 2005 until 2008, 96 screenings were undertaken in Austria of which 17 required EIAs. In the same period, 2500 screenings were conducted in Denmark, of which 125 made EIAs necessary (GHK, 2010).

information submitted to the competent authority. On the one hand, Scoping can be conducted by the developer, who forwards the gathered information to the competent authority and the public. On the other hand, the developer may request the competent authority to prepare an opinion on the scope of the environmental information required (EIA Directive, art. 5(2)). This opinion represents a guideline for the developer for her preparations.

The scoping report may contain (European Commission, 2001b):

- *"alternatives, which should be considered*
- *baseline surveys and investigations, which should be carried out*
- *methods and criteria to be used for prediction and evaluation of effects*
- *mitigation measures, which should be considered*
- *organisations, which should be consulted during the environmental studies*
- *the structure, content and length of the environmental information"*

In some Member States consultations are not only held with the respective authorities, but also with the public. Public hearings allow the public to utter their concerns and to comment on the envisaged project.

Although scoping is not required in all Member States it assists in preparing a comprehensive view on the project and its effects. Furthermore, it helps the developer to focus on the relevant areas and to gather only the necessary information. Even though the screening and scoping procedure exhibit overlaps, it is definitely worth to undertake also the screening procedure, since the advantages apparently outweigh the disadvantages.[8]

In the next step, environmental studies are conducted by the developer in accordance with article 5(3) and Annex IV of the EIA Directive.

2.1.6.3. Environmental Impact Statement (EIS)

The developer is in charge to compose an environmental impact statement, after having evaluated the results of eventual environmental studies. The statement must include all

[8] Some developers discard the Screening because they consider it a waste of time. They prefer to undertake immediately an environmental impact assessment without knowing whether it is actually required (Commission of the European Communities, 1993).

necessary information to assess whether the project has significant effects on the environment. Moreover, article 5(3) and Annex IV of the EIA Directive must be taken into account.[9] This statement represents the basis for the assessment by the competent authority, whereby the authority may request further information if it deems it necessary.

Supplementary, a technical documentation will be required, which contains detailed information about, inter alia, the technology used, an appropriate monitoring technology and the waste management concept.

When the environmental information is publicised, the authorities involved, other environmental organisations, affected Member States and the public concerned must be given enough time to comment on the envisaged project (European Commission, 2001c).

The last step is the announcement of the decision by the competent authority, whereby it has to state not only the reasons for its decision, but also the envisaged mitigation measures in order to cope with the potential environmental impacts (EIA Directive, art. 9).

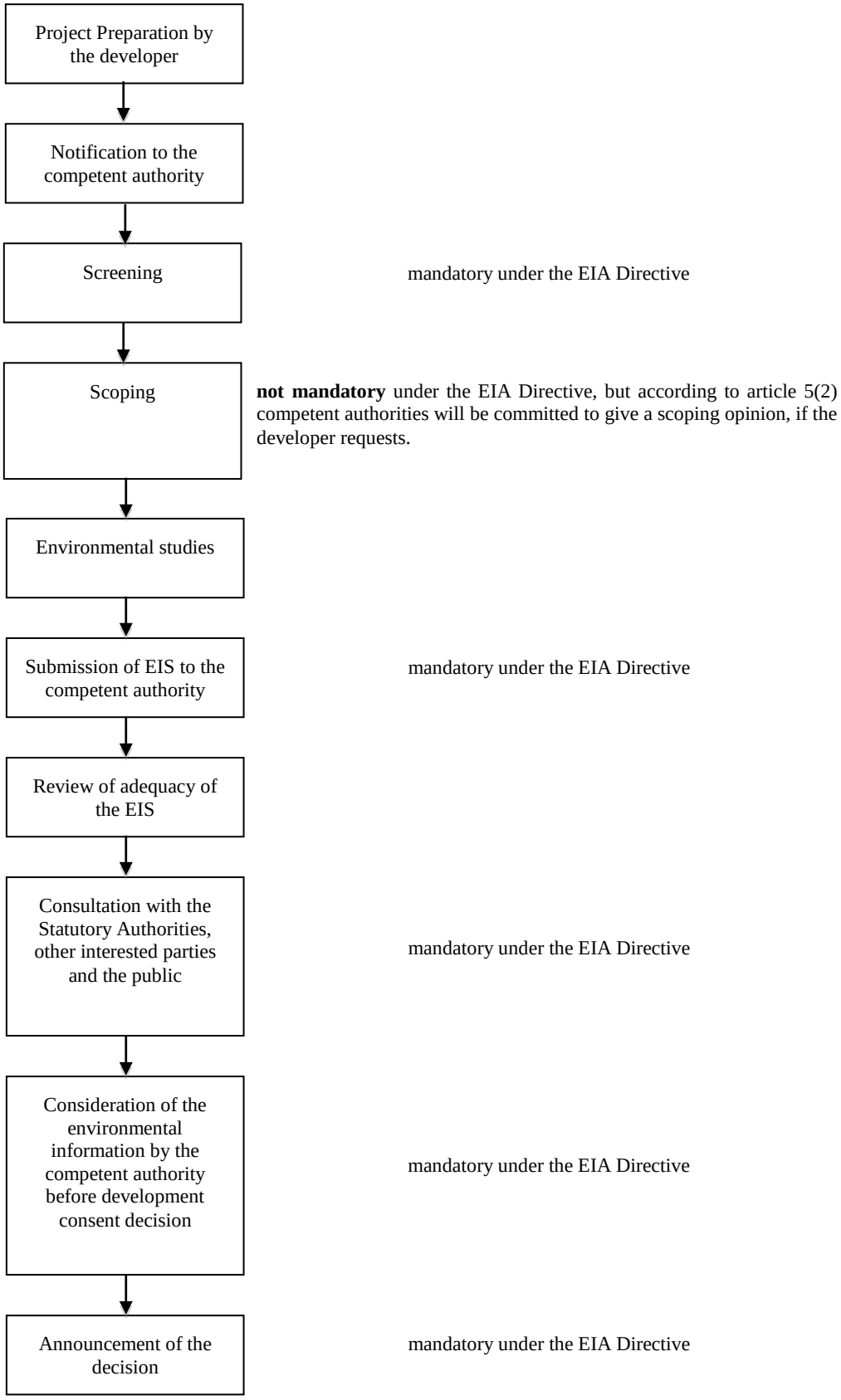
2.1.7. Summary and important remarks

- Both private and public projects are subjected to the EIA Directive.
- Since the 2003-amendment, the EIA process became more transparent. Particularly the public concerned is well integrated.
- Member States bear a lot of responsibility and can therefore contribute to the effectiveness of the national procedures. This is especially conspicuous for thresholds and criteria for Annex II projects.
- The national implementation methods of the EIA Directive vary throughout the European Union, but at least a minimum of harmonisation has been achieved.
- The EIA Directive does not contain any provisions for the monitoring of identified potential adverse effects.
- The possibility of non-realisation of a project is not considered.

[9] The European Commission issued a manual on the creation and review of the EIS in order to facilitate both processes for developers, but also for the competent authorities. This manual also includes a helpful checklist, which enables the stakeholders to make a quick check whether all required information is covered.

- The term "reasonable time frame" should be more precisely defined. A certain number of weeks would be helpful.
- A maximum time frame for the whole EIA process would be preferable.

Figure 2 - Environmental Impact Assessment - An Overview (European Commission, 2001a)



2.2. Strategic Environmental Assessment Directive

In 2001, the Directive on the assessment of the effects of certain plans and programmes in the environment entered into force. It was designed to integrate environmental issues into the decision-making process of plans and programmes. For that reason, certain plans and programmes likely to have significant effects on the environment are subject to a strategic environmental assessment. The SEA Directive does not only contain provisions related to the framework and to the rules of engagement, but it also gives some indication regarding the SEA procedure itself.

2.2.1. Purpose

The purpose of the SEA Directive is not only set out in article 1 but also in the preamble. On the one hand, the Directive aspires after increasing the general protection of the environment and after better integration of environmental preparation into the decision-making process of plans and programmes (SEA Directive, art.1). On the other hand, it reiterates the precautionary approach and refers to article 191 (ex article 174 TEC) of the Treaty on the European Union.[10]

[10] „*1. Union policy on the environment shall contribute to pursuit of the following objectives:*

— preserving, protecting and improving the quality of the environment,

— protecting human health,

— prudent and rational utilisation of natural resources,

— promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

2. Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

In this context, harmonisation measures answering environmental protection requirements shall include, where appropriate, a safeguard clause allowing Member States to take provisional measures, for non-economic environmental reasons, subject to a procedure of inspection by the Union.

3. In preparing its policy on the environment, the Union shall take account of:

— available scientific and technical data,

— environmental conditions in the various regions of the Union,

— the potential benefits and costs of action or lack of action,

— the economic and social development of the Union as a whole and the balanced development of its regions.

Paragraphs 4,5, and 6 of the preamble give an additional definition of the objectives of the Directive as follows:

- *"[…] Environmental assessment ensures that such effects of implementing plans and programmes are taken into account during their preparation and before adoption"* (SEA Directive, Preamble – para. 4).
- *"[…] Undertakings should benefit from the adoption of environmental assessment procedures by providing a more consistent framework in which to operate by the inclusion of the relevant environmental information into decision making. The inclusion of a wider set of factors in decision making should contribute to more sustainable and effective solutions"* (SEA Directive, Preamble – para. 5).
- *"The different environmental assessment systems operating within Member States should contain a set of common procedural requirements necessary to contribute to a high level of protection of the environment"* (SEA Directive, Preamble – para. 6).

The purpose of the Directive must be seen in a wide sense, whereby the following objectives can be identified:

- Effects on the environment must be brought to the forefront.
- Better evaluation of mitigation measures.
- Better cooperation of authorities and more public participation.
- Direct, indirect and cumulative effects arising from interdependencies between projects ought to be considered.
- Economic, social and environmental factors should be taken into account on an equal basis.
- The identified environmental impacts are to be monitored after the realisation of the plan or programme.

Article 3 specifies the scope of the Directive and states that all plans and programmes, which are likely to have significant impacts on the environment, and which are prepared for certain economic sectors, where they are setting the framework for the development of projects

4. Within their respective sphreres of competence, the Union and the Member States shall cooperate with third countries and with the competent international organisations. The arrangements for Union cooperation may be subject of agreements between the Union and the third parties concerned.
The previous subparagraph shall be without prejudice to Member States' competence to negotiate in international bodies and to conclude international agreements" (Treaty of the European Union, art. 191, 2010).

belonging to Annex I and II of the EIA Directive are subject to the SEA Directive. Additionally, all plans and programmes are subject to the SEA Directive, which are considered to have effects on sites covered by the Habitat Directive 92/43/EEC.

2.2.2. Plans and programmes

Article 2 of the SEA Directive describes what is meant by plans and programmes. First of all, the Directive relates to plans and programmes, which are prepared or adopted by an authority on national, regional or local level. Secondly, it encompasses plans and programmes prepared by an authority for adoption by parliament or government. Thirdly, it relates to plans and programmes, which are required by legislative, regulatory or administrative provisions (SEA Directive, art. 2). Plans and programmes are for instance: Area zoning plans, waste management plans or action plans relating to air quality management.

Some experts take the view that the SEA Directive also relates to policies, although the Directive explicitly mentions plans and programmes only.[11] Furthermore, it is stated on the homepage of the Environment Department of the European Commission that the SEA Directive does not encompass policies (European Commission, 2012).

It seems to be clear that the Directive cannot apply to a certain policy, since a policy comprises principles and rules, which aim at achieving long-term goals. This mindset cannot be subject to an environmental assessment, as nothing specific or tangible could be evaluated. However, plans and programmes represent a definite implementation of decisions.[12]

The situation does not change if the formulation of the Aarhus Convention is taken into account. Admittedly, in this Convention not only plans and programmes, but also policies

[11] cf. Arbter, Kerstin (2010)

[12] A definition of plans and programmes can be found in case C-295/10 Valčiukienė and Others v Pakruojo rajono savivaldybė and Others: *"plans and programmes are documents relating to planning at national, regional or local level (… land planning documents, …) which are prepared, approved and/or adopted according to the legislation in force or in accordance with the implementing powers of public administrative authorities […]"* (Preliminary ruling of the Euorpean Court of Justice to case C-295/10 Valčiukienė and Others v Pakruojo rajono savivaldybė and Others)

are mentioned. However, the scope and definition of these policies does not relate to the definitions stated in the EIA Directive.

2.2.3. Exemptions

Article 3 of the SEA Directive deals with its scope and gives information about the exemptions from the Directive. Firstly, plans and programmes in the interest of national defence or civil emergency are excluded from it. Additionally, those defence plans and programmes must be entirely dedicated to military activities[13]. Secondly, financial or budget plans and programmes are exempted. Thirdly, the Directive does not apply to plans and programmes, which are co-financed under the Regulations 1260/1999[14] and 1257/1999[15].

2.2.4. Information – the Environmental Report

The SEA Directive states explicitly which information[16] should be considered in order to prepare the Environmental Report. This report forms the basis for the later evaluation of plans and programmes and their potential effects on the environment. According to article 5 and Annex I the following issues are to be taken into account:

- The likely significant effects on the environment, when the plan or programme is implemented
- Reasonable alternatives
- The geographical scope of the plan or programme
- The required information evaluated on the basis of current knowledge and methods of assessment
- At which stage the Environmental Report is to be prepared
- Which level of detail is pursued

[13] An important ruling of the ECJ is the case C-435/97 (WWF v. autonomous province of Bozen). It was actually concerned with the EIA Directive, yet its implications affect also the interpretation of the SEA Directive, since the exemptions are similar in both cases.
[14] Regulation 1260/1999 on laying down general provisions on the Structural Funds.
[15] Regulation 1257/1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain regulations.
[16] art. 5 and Annex I stipulate which type of information is required.

- Recommendations for the assessment of certain matters on different levels of the evaluation process
- The relationship between the plan or programme under scrutiny with other plans and programmes
- The evolution of the environment without implementing the plan or programme (zero option)
- Environmental difficulties arising from the implementation of the plan or programme. Particularly, if the plan or programme affects sites covered under Directives 79/409/EEC[17] and 92/43/EEC[18].
- The envisaged mitigation measures in order to offset adverse effects
- A non-technical summary
- Monitoring measures

2.2.5. Public Participation/Transparency/Transboundary Impact

The responsibility for making the gathered information and the plan or programme available to the authorities, which are likely to be involved, and to the public lies with the Member States. They have to decide which authorities are most likely required for the further evaluation procedure and they have to identify the public affected (SEA Directive, art. 6(1-5)). Both the public and the authorities may comment on the draft and the Environmental Report within a reasonable time frame.

The relevance of Non-Governmental Organisations, which are likely to have an interest in the assessment procedure and the decision-making process are also to be identified by the Member States (SEA Directive, art. 6(4)).

Consultations are not only considered to be the interactions between the executive authority, other authorities involved and the public identified by the Member States, but also as information exchange between Member States if transboundary environmental effects are likely. In that case, the draft of the plan or programme and the Environmental Report are to be submitted to the affected Member State, which may enter into consultations concerning potential adverse environmental effects and the corresponding mitigation measures (SEA

[17] Council Directive on the conservation of wild birds.
[18] Council Directive on on the conservation of natural habitats and of wild fauna and flora.

Directive, art. 7). Moreover, the public in the affected Member State is to be given enough time to formulate and submit its opinion on the proposed plan or programme to the executive authority of the initiator Member State.

2.2.6. Strategic Environmental Assessment Procedure

The SEA Directive comprises provisions both for the execution of a Strategic Environmental Assessment and the contents of the required information for the Environmental Report. As a consequence, the SEA should be conducted simultaneously to the planning process in order to achieve the maximum integration of environmental issues. Both the planning process and the Strategic Environmental Assessment have an effect upon each other, whereby the efficiency of both processes should be increased (Arbter, 2010).

The SEA consists of several procedural steps: Screening, Scoping, the creation of the Environmental Report, Participation of the public and other authorities (consultations), decision making, Announcement and Statement of reasons, Monitoring.

Figure 3 - Integration of environmental issues (Arbter, 2010)

2.2.6.1. Screening

The SEA Directive determines plans and programmes for which a Strategic Environmental Assessment is mandatory (SEA Directive, art. 3(2)) and it stipulates an area of application, where an assessment is only required if the plans and programmes in question are likely to have significant environmental effects (SEA Directive, art. 3(3-4)). According to article 3(3-4) the following plans and programmes require a screening procedure only under specific conditions:

- Plans and programmes determining the assignment of small areas on local level (SEA Directive, art. 3(3)).
- Plans and programmes defined in article 3(2), which are subject to minor modifications.
- Plans and programmes, which do not fall within the scope of article 3(2) and set the framework for future development consent of projects (SEA Directive, art. 3(4)).

Three possibilities are given at Member States' hand in order to determine if a certain plan or programme is to be evaluated by the strategic environmental assessment (SEA Directive, art. 3(5)):

- a case-by-case examination
- the determination of specific types of plans or programmes
- the combination of both methods

Irrespective of which method is chosen the criteria of Annex II of the SEA Directive must be considered in order to ensure that the Directive covers the plans and programmes in question.

2.2.6.2 Scoping

The goals of plans and programmes and the corresponding environment protection targets are to be determined for the further assessment in order to lay down a rough sketch of the

Environmental Report. Article 5 states the content-related requirements for the Environmental Report. In addition, it demands the consultation of other authorities involved in order to delineate the scope and to determine the level of detail.

The Scoping procedure is crucial in order to avoid duplication in the further assessment process. Additionally, the level of detail, the assessment method, the alternatives under scrutiny and the team of experts are determined.

Scoping also provides the possibility to ensure the envisaged quality of the overall assessment and particularly of the Environmental Report. Besides that, a high quality of the report is also emphasized by article 12(2) of the Directive, in which Member States are committed to guarantee a sufficient quality of the Environmental Report (SEA Directive, art. 12(2).

2.2.6.3. Environmental Report

The Environmental Report acts as a transparent documentation of the Strategic Environmental Assessment. The information required is stated in article 5 and in Annex I of the SEA Directive as illustrated earlier in the chapter Information – the Environmental Report.

2.2.6.4. Decision-making

The results of a conducted Strategic Environmental Assessment shall be incorporated into the preparation of plans and programmes. Article 8 of the SEA Directive is dedicated to the decision-making process. It emphasizes the importance of taking into account the Environmental Report, the opinions submitted in the course of consultations and the outcome of the information exchange between the initiator and the affected Member State *"[…] during the preparation of the plan or programme and before its adoption or submission to the legislative procedure"*(SEA Directive, art. 8).

2.2.6.5. Announcement and Statement of reasons

Moreover, article 9 determines which information about the decision shall be made available to the authorities concerned, to the public and to any Member States, with which consultations were conducted (SEA Directive, art. 9):

- the plan or programme adopted

- a statement about the taking into account of the environmental issues mentioned in article 8
- reasons for choosing the selected option
- monitoring measures

It is very important to ascertain that the executive authority is in charge to deal with the information gathered in the course of the Strategic Environmental Assessment, and that the mere notice of it would be not sufficient (Österreichisches Umweltbundesamt, 2011).

If many extensive comments or objections were submitted, it could be necessary to forward these documents to other experts in order to come to grips with the new material and to integrate it into the decision-making (Sommer, 2005).

2.2.6.6. Monitoring

The SEA Directive requires the Member States to monitor the determined significant effects on the environment, which arise due to the implementation of the plan or programme in question (SEA Directive, art. 10). The Environmental Report represents the basis of the monitoring. For that reason, it is important that answers to the following questions are already included in the Environmental Report (Sommer, 2005):

- What is to be monitored
- In which way must the monitoring be conducted
- When must it be conducted
- How often must it be conducted
- Who executes the monitoring
- Which consequences can arise by the monitoring

The monitoring is considered a major strength of the Directive, since unforeseen adverse effects can be counteracted by the implementation of measures designed to remedy the effects.

The Directive does not provide any information about the documentation of the monitoring and the data preparation. Therefore, the Member States have a lot of room for manoeuvre to create more or less reasonable provisions. On the one hand, this can be seen as weakness, since Member States could then be prone to undermine the overall objectives of the Directive. On the other hand, Member States can act without constraints, are able to respond

to certain national conditions and are able to adapt the Directive to the national legislation in the best way.

2.2.7. Relationship with other Community legislation

In the SEA Directive a whole article (art. 11) is dedicated to the relationship between the Directive and other legislation of the European Union. Special reference is given to the relation EIA/SEA. According to article 11(1) the provisions of the SEA Directive have neither effect on the rules and principles of the EIA Directive, nor on any other Community law requirements. Equally important, Member States are encouraged to provide coordinated or joint procedures, if the obligation to carry out assessments arises from the SEA Directive and other Community legislation (SEA Directive, art. 11(2)). A coordinated procedure would be for instance the simultaneous or parallel execution of the Environmental Impact Assessment. A joint procedure would be the creation of one single assessment that fulfils the requirements of the relevant Community legislation.

The importance of coordinated or joint procedures is also underlined by recital 19 of the preamble, where the avoidance of duplications is emphasized. Special reference is given to: 1. The Directive on the conservation of wild birds[19]; 2. The Directive on the conservation of natural habitats and of wild fauna and flora[20]; 3. The Directive of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy[21].

2.2.8. Summary and important remarks

- The SEA Directive is very well structured and offers helpful guidance for the execution of the assessment.
- Particular attention is paid to the evaluation of different alternatives of plans and programmes and their respective effects on the environment.

[19] Directive 79/409/EEC
[20] Directive 92/43/EEC
[21] Directive 2000/60/EC

- The taking into account of the potential non-realisation of a plan or programme (zero-option) is a major strength of the Directive, since this option can be considered the reference value with which all other alternatives can be compared.
- The Strategic Environmental Assessment is a comprehensive and extensive process. For that reason, it is of particular interest to prevent duplications. In that context scoping is considered to be the appropriate means.
- The monitoring of identified and unexpected significant environmental effects supports the overall objective to keep the anthropogenic influence on the environment as low as possible.
- The criteria for the determination of likely significant effects are clearly structured in Annex II of the Directive. This fact contributes to the ongoing harmonisation of environmental quality standards throughout the European Union.
- Unfortunately there is no extensive jurisdiction of the European Court of Justice available, which would help with the interpretation of the SEA Directive. The only relevant case that was brought before the ECJ was C-295/10 Valčiukienė and Others v Pakruojo rajono savivaldybė and Others.[22]
- Consultations are conducted twice during the SEA process. For the first time, the authorities likely to be concerned are to be consulted during the scoping procedure, and for the second time, the above-mentioned authorities and the public are invited to the consultations.
- The SEA Directive was due for implementation in the national legislations in July 2004. Yet, on this reference date only in less than half of the Member States the Directive was fully operational. Unfortunately there is no reliable source providing current data about the ongoing transposition progress.

[22] In the case C-295/10 Valčiukienė and Others v. Pakruojo rajono savivaldybė and Others the ECJ answers mainly three questions:

a. Does the SEA procedure apply to land planning documents, which mention only one subject of economic activity?
b. If an assessment according to the EIA Directive was carried out, is it necessary to conduct a Strategic Environmental Assessment in order to comply with the SEA Directive?
c. Are Member States committed to provide coordinated or joint procedures?

To a.: The ECJ states that the SEA procedure applies also in this case. It explains its decision by referring to the hypothetical case, in which a large project only concerned with one economic activity would not fall into the scope of the SEA Directive if another interpretation was applied.

To b.: The ECJ states that the Court of the respective Member State has to determine whether the already performed Environmental Impact Assessment fulfils the SEA requirements.

To c.: The ECJ does not see any obligation of Member States to provide a coordinated or joint procedure.

3. Differentiation of EIA and SEA Directive

In the last chapter the scope of the two Directives was set forth. There exist a lot of similarities, since both Directives are revolving around the same issue: The assessment of actions with regard to their adverse effects on the environment. However, the Directives are operating on different levels and tackle the issue from two different perspectives. For that reason a precise distinction is absolutely necessary. Not only because of the comprehensive protection of the environment, but also to ensure legal certainty for developers and authorities.

Particularly the last argument is critical, as the application of the wrong assessment procedure could lead to the withdrawal of the permission for the realisation of a project, plan or programme. Therefore, the following chapter is supposed to elucidate this subject matter and to give a clearly structured analysis at hand.

3.1. Project level v. Plan and Programme level

The EIA Directive provides extensive and detailed information about its scope. It properly defines the used terms (e.g. developer, projects, development consent) and it supplies lists for mandatory and for facultative assessment of projects.[23] The situation is completely different, when we have a look at the SEA Directive. In that case it is taken for granted that there is consensus about the meaning of plans and programmes. The already mentioned case Valčiukienė and Others v. Pakruojo rajono savivaldybė and Others exactly reveals amongst others this problematic nature. Moreover, the SEA Directive lacks an extensive list providing qualitative and quantitative data about its scope. For that reason, the determination whether a plan or programme must be strategically assessed is much more demanding than in the EIA case.[24]

It is apparent that the Strategic Environmental Assessment is conducted at an earlier stage than the EIA. By definition the SEA must be performed during the preparation of a plan or

[23] EIA Directive art. 1 and 4 and Annex I and II

[24] Some examples for the conduct of the SEA in Austria: Waste Management Plan of the state Vorarlberg, Viennese Waste Management Plan, SEA for the area zoning plan of the city Weiz, SEA for the regional programm Tennengau, the SEA for the development area in the Northeast of the city of Vienna or the national water management plan for Austria (Österreichisches Umweltbundesamt, 2011).

programme, whereas the EIA takes place before consent is given. The earlier integration of environmental issues was the main driving force for the enacting of the SEA Directive.

3.2. Developer v. executive authority

The developer of a project represents together with the competent authority the principal performers of the Environmental Impact Assessment. In the case of the EIA the developer can be on the one hand a private entrepreneur and on the other hand a public authority. The developer is in charge to provide the required information in order to perform eventual studies and to prepare the Environmental Impact Statement. The supplied information serves as the basis for the EIA conducted by the competent authority.

The SEA Directive does not provide any detailed information about the liabilities for the conduct of the assessment and the preparation of the Environmental Report. It only states the obligation, but leaves the exact implementation to the Member States. Nonetheless, it seems to be reasonable and mainstream, that an executive authority gathers the necessary information and conducts the assessment. In Austria, the creation of a SEA-Team comprising the authorities concerned and all other stakeholders proved successful (Arbter, 2010). Additionally, external experts can be consulted wherever it is deemed necessary.

3.3. The level of detail and criteria

3.3.1. Level of detail

The level of detail and the scope of the two assessment methods are very different. On the one hand the EIA provides an extremely detailed examination of the potential adverse effects on the environment caused by the realisation of a certain project. Furthermore, the EIA Directive leaves vast discretion to the developer in selecting adequate alternatives. Though, this can be used to cast a more favourable light on the project in question. On the other hand, the SEA Directive represents an instrument that allows for the comparison of several reasonable alternatives in the course of the preparation of a plan or programme. Sustainable development and long-term planning are at the forefront of the Strategic Environmental Assessment. For that reason, the level of detail is lower compared with that of the EIA but its scope is larger.

3.3.2. Criteria concerning screening and required information

Both Directives provide criteria in their Annexes concerning the required information and the screening procedure.

3.3.2.1. Screening procedure

Differences in the screening procedure can be inferred from the relevant criteria in Annex III of the EIA Directive and Annex II in the SEA Directive.

The following criteria are considered in both Directives, however, sometimes to a different extent:

a. The spatial extent of the environmental effects
b. The transboundary nature of the environmental effects
c. The magnitude
d. The probability, duration, frequency and reversibility of the environmental effects
e. The environmental sensitivity of geographical areas (land use, cultural heritage, areas where environmental quality standards or limit values are already exceeded)
f. The effects on areas protected under national legislation
g. Sustainable Development
h. Consideration of interdependencies between projects on the one hand, and between plans and programmes on the other hand.

ad e: The EIA Directive is in this regard more specific and refers additionally to: relative abundance, quality and regenerative capacity of natural resources; and the absorption capacity. In that specific context the EIA Directive lists the following areas: wetlands; coastal zones; mountain and forest areas; nature reserves and parks; and densely populated areas.

ad f: The EIA Directive states only the protection under national legislation and refers to the protection areas covered by Directives 79/409/EEC and 92/43/EEC. The SEA Directive covers areas subjected to national, community and international protection status.

ad g: For simplicity the stated characteristics in the EIA Directive (use of natural resources; production of waste; pollution and nuisances; risk of accidents) are considered to be captured by the term “Sustainable Development”.

Additional referrals for the screening procedure are:

- The complexity of the impact (EIA Directive)
- The cumulative nature of the effects (SEA Directive)
- The risks to human health or the environment (SEA Directive)

3.3.2.2. Required Information

Both Directives require the gathering of necessary information in order to provide the fundamental basis for the assessment. The SEA Directive requires additionally the preparation of an Environmental Report, which has to fulfil certain criteria. In contrast, the EIA Directive is silent about the form of the gathered information, yet it became common practice to formulate an Environmental Impact Statement (European Commission, 2001c).

In the case of the EIA, the required information has to be gathered by the developer of a project. She submits the information to the competent authority, which is in charge to conduct the assessment. In the strategic assessment the executive authority represents both the applicant and the reviewer at the same time. Despite the differences in the assessment procedures, similar criteria with regard to the information can be identified.

In both Directives the following criteria are stated[25]:

a. Consideration of alternatives
b. Description of environmental areas likely to be significantly affected
c. Description of the likely significant effects on the environment
d. Mitigation measures
e. The preparation of a non-technical summary

ad a: In the case of the Environmental Impact Assessment it is the task of the developer to choose the alternatives taken into account and to give reasons for her choice. She must consider these alternatives with respect to environmental adverse effects.

[25] EIA Directive Annex IV and SEA Directive Annex I

The Environmental Report must state the reasons for selecting the considered alternatives, a description of the assessment method used and the difficulties arisen during the compilation of the information. The taking into account of the zero-option is of particular importance, since the strategic assessment contains also the possibility of the non-realisation of the plan or programme in question. In contrast to that, the overall goal of the EIA is development consent. The EIA aims at altering a proposed project, so that it complies with environmental standards, but not at denying approval.

ad b: The EIA Directive requires the description of the environment likely to be affected and states a number of issues (population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors (EIA Directive, Annex IV)). This is also true for the Strategic Environmental Assessment, yet the SEA Directive states the quoted issues only with respect to the description of significant effects.

ad c: The EIA Directive demands the description of the likely significant effects only with respect to the impact resulting from *"the existence of the project; the use of natural resources; and the emission of pollutants, the creation of nuisances and the elimination of waste"* (EIA Directive, Annex IV). In contrast to that, the strategic assessment is conceived in a more general way and requires the description of the likely significant effects on biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors (SEA Directive, Annex I). Of utmost importance are the footnotes in both Directives demanding for the consideration of secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the projects, plans or programmes respectively. Moreover, the EIA Directive speaks of direct and indirect effects, whereas the SEA Directive mentions synergistic effects. Therefore, it seems to be necessary to define those terms.

- The term "direct" means the immediate (without any detours) effect on the environment (e.g. the odour nuisances by a landfill).
- Indirect effects are not directly connected to the original action. The indirect effects often occur far away and sometimes delayed from the actual action under consideration (e.g. application of fertilizer in agriculture may result in the pollution of ground water) (Sheate et al., 2004).

- Synergistic effects are *"cumulative effects that result when the interaction of a number of impacts is greater than or different from the sum of the individual impacts"* (Sheate et al., 2004).

Both Directives require describing the content, characteristics and objectives of the project, plan or programme but they vary slightly in the level of detail. The EIA Directive is more technically formulated, whereas the SEA Directive focuses particularly on the linkage with other plans or programmes.

The environmental protection objectives, a specific referral to Directives 79/409/EEC[26] and 92/43/EEC[27] and monitoring measures are only mentioned in the SEA Directive, whereas the Environmental Impact Assessment Directive requires describing the methods used for the evaluation of environmental effects and it asks for reporting all difficulties encountered, when gathering the required information.

Although not included in the Annexes, the EIA Directives explicitly requires (EIA Directive, art. 5(3)) the submission of minimum information by the developer. There is no equivalent existing in the SEA Directive.

3.4. Monitoring[28]

Monitoring measures have already been briefly addressed in the chapter before and are only mandatory under the SEA Directive. The importance of that provision must not be underestimated, since it allows for the continuing assessment of the respective plan or programme. Moreover, the effectiveness of the mitigation measures can be determined and countermeasures can be taken at an earlier stage.

The lack of the monitoring provision in the EIA Directive has already been identified by a study conducted in 1997 (Colombo, Haq and Melaki, 1997). In the course of this study respondents were asked to state their opinion to several selected issues in order to determine

[26] Council Directive on the conservation of wild birds
[27] Council Directive on on the conservation of natural habitats and of wild fauna and flora
[28] Throughout this thesis and in the case of environmental assessment, monitoring is considered to be a systematic, continuing and reiterative measurement of significant environmental effects.

the main deficiencies of the EIA Directive. The result was the following table, which identified the major lacks with respect to the monitoring issue.

Table 1 - Degree of respondents' agreement to stated main deficiencies with regard to monitoring in EIA (Colombo, Haq and Melaki, 1997)

Deficiency	Frequency of respondents' agreement				
	Strongly agree	Agree	Disagree	No response	Total number of responses
Lack of monitoring provision in EIA during both the construction and operation phases of the project	**21**	**11**	**11**	**3**	**46**
Insufficient monitoring of all important environmental factors not only air and water	**15**	**21**	**5**	**5**	**46**
Poor enforcement of monitoring arrangements in the Member States	**26**	**8**	**5**	**6**	**46**
Lack of methodologies to undertake monitoring	**11**	**12**	**18**	**5**	**46**
Other	**5**		**-**	**41**	**46**

Although the results from this study were not completely integrated in the SEA Directive, the monitoring provision can be considered the response to these findings.

3.5. Relationship with other Community legislation

The EIA Directive is rather silent about its relation to other Community legislation. It merely mentions the possibility that the Member States may establish one procedure that also complies with the requirements of Directive 96/71/EC[29]. In a more general form the EIA Directive articulates the option to include the EIA procedure in other existing procedures: *"The environmental impact assessment may be integrated into the existing procedures for consent to projects in the Member States, or, failing this, into other procedures or into procedures to be established to comply with the aims of this Directive"* (EIA Directive, art. 2(2)). After all, this article seems to repeat primarily the inherent obligation of Member States to transpose Directives into national legislation.

[29] Directive on integrated pollution prevention and control

In addition, the EIA Directive states that it complies with the provisions of the Directive on public access to environmental information[30], so that the relevant information is made available for the public. In Annex I, II and III other referrals to Community legislation can be found:

- The Directives on waste[31] and hazardous waste[32] are mentioned in the context with waste disposal installations for incineration or chemical treatment of waste (EIA Directive, Annex I)
- The Directive concerning urban waste-water treatment[33] with regard to regulations concerning waste water treatment plants.
- The Directive on the geological storage of carbon dioxide[34] with respect to installations for CCS.

In contrast, the SEA Directive dedicates a whole article (SEA Directive, art. 11) to its relationship with other Community legislation. As a consequence, it is easier to identify its relations and it ensures a higher level of legal certainty. The SEA Directive explicitly states that the strategic environmental assessment shall be conducted without altering or limiting the obligations of other Community law or in particular the obligations of the EIA Directive (SEA Directive, art. 11(1)). There is also no EIA-equivalent to the provision that allows for establishing coordinated or joint procedures, if other assessments have to be carried out simultaneously (SEA Directive, art. 11(2)). Finally, the relationship is specified for the case of plans and programmes co-financed by the European Community. Here, the provisions of the relevant Community legislation are to be applied.

Furthermore, the SEA Directive refers to the following Directives, Council regulations and international instruments:

a. The Directive on the conservation of natural habitats and of wild flora and fauna[35]
b. The United Nations Economic Commission for Europe Convention on Environmental Impact Assessment in a Transboundary Context
c. The Convention on Biological Diversity

[30] Directive 2003/4/EC
[31] Directive 75/442/EEC
[32] Directive 91/689/EEC
[33] Directive 91/271/EEC
[34] Directive 2009/31/EC
[35] Directive 92/43/EEC

d. The Directive on the conservation of wild birds[36]
e. Council Regulation 1260/1999 laying down general provisions on the Structural Funds
f. Council Regulation 1257/1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund.
g. The EU Water Framework Directive[37]

ad e/f.: The SEA Directive does not apply to projects, which are covered by those Regulations.

ad a/g.: The SEA Directive states these Directives with respect to the possibility to provide a joint or coordinated procedure for the arising assessment obligations.

3.6. Consultations

Both Directives mention the term "consultation", whereby the context and interpretation differ in some respect. In both cases consultations can be referring to the interaction with authorities, the public or with other Member States.

The provisions for transboundary consultations are in both Directives very similar. Both instruments ask for taking into account comments put forward by the public likely to be affected and by the relevant authorities. Furthermore, the Directives require the Member States to enter into consultations before development consent respectively before adoption of the plan or programme.

With respect to consultations of the public, the two Directives reveal certain differences. The EIA Directive uses the formulation: *"The detailed arrangements […] for consulting the public concerned […] shall be determined by the Member States"* (EIA Directive, art. 6(5)). This is the only referral to consultations with regard to the public. Both Directives are not explicit about what is actually meant by consultations, however the SEA Directive mentions in its Preamble that *"[…] authorities with relevant environmental responsibilities and the*

[36] Directive 79/409/EEC
[37] Directive 2000/60/EC

public are to be consulted during the assessment of plans and programmes […]" (SEA Directive, Preamble (15)) and that consultations include the expression of opinions.

The consultations of relevant authorities are absolutely differently interpreted. In the EIA Directive, consultations of the authorities are only related to the expression of their opinion on the information that is submitted by the developer (EIA Directive, art. 6(1)). Therefore, consultations of authorities are not mandatory under the EIA Directive. In contrast, the SEA Directive requires consultations of the authorities if:

- case-by-case examinations are to be conducted and the environmental scope must be determined (SEA Directive, art. 3(6))
- the level of detail has to be determined (SEA Directive, art. 4)

However, the detailed arrangements for consultations are to be provided by the Member States according to article 6(5) of the SEA Directive.

To sum up, the SEA Directive pays more attention to the integration of the public into consultations and eventually into decision-making. The fact that its Preamble refers to consultations of the public supports this interpretation. Additionally, the provisions of the SEA with regard to consultations aim at participation at an early stage.

3.7. Decision-making

The aim of the Strategic Environmental Assessment Directive is the taking into account of environmental issues at an early stage. Therefore, the SEA Directive states as a general obligation in article 4 that *"the environmental assessment referred to in Article 3 shall be carried out during the preparation of a plan or programme and before its adoption or submission to the legislative procedure"* (SEA Directive, art. 4(1)). Moreover, article 8, which is dedicated to the decision-making process, repeats this mentioned formulation. The EIA Directive merely requires the conduct of the assessment before development consent, which leaves more discretion to the Member States. However, it has to be stated that the EIA-formulation does not prevent Member States from carrying out the assessment at an earlier stage. In the end both Directives provide the possibility for executing the assessment early in the decision-making process, but the SEA Directive puts more emphasis on it.

3.8. Review, information exchange and reporting

Both Directives require the exchange of information between Member States and the European Commission regarding the application of the Directives. However, the other related provisions are covering very different issues. The EIA Directive focuses on the submission of determined thresholds and criteria for Annex II projects to the Commission. Moreover, it requires the preparation of a report by the Commission in order to determine the effectiveness of the Directive. The report shall be prepared five years after the adoption of the Directive. Finally, the Commission shall develop a more coordinated application of the Directive, if this should be necessary.

In contrast, the SEA Directive pays more attention to the quality control of the Environmental Report and to an effectiveness report of the application of this Directive. The report shall be prepared five years after adopting the Directives, and thereafter every seven years. The Commission shall provide proposals for amendments and for the extension of the scope of the Directive. Finally, the Commission is in charge to report on the relation between the SEA Directive and two particular Regulations (No. 1260/1999 and No. 1257/1999) in order to provide a more coherent approach for the functional interaction of the Directive and future Regulations. The EIA Directive neither provides information about the preparation of periodical reports, nor about the eventual extension of the scope of the EIA Directive.

3.9. Procedural Differences

At first glance the stipulated procedures for the Strategic Environmental and the Environmental Impact Assessment appear to be quite similar. In fact, the provisions reveal a couple of important differences not only in the detail, but also in general obligations.

It is apparent that at the screening stage both Directives demand on the one hand a mandatory assessment of certain projects, plans and programmes (PPPs) and on the other hand a facultative assessment. Hence, the EIA Directive provides two Annexes listing specific projects for which mandatory or facultative assessments are foreseen, whereas the SEA Directive states more generally the areas of plans or programmes for which the assessment is necessary (SEA – Open Educational Resource, 2011). In both cases the Member States are in charge to determine whether assessments are required for PPPs where

EIA or SEA are not obligatorily demanded. Both Directives give the Member States tools and criteria at their hands in order to determine an eventual obligation. The possibility of case-by-case examinations is provided in both Directives, whereby the EIA Directive asks the Member States in addition to develop thresholds and criteria. The SEA Directive demands the specification of types of plans and programmes and allows additionally the combination of this tool and the case-by-case examination. Moreover, the consultation of authorities concerned (SEA Directive, art. 6(3)) represents only a requirement under the SEA Directive. Finally, both Directives require the publication of the arbitration and the reasons whether an assessment is necessary or not (Sheate et al., 2004). Yet, the SEA Directive necessitates this only for the case, when the SEA is not needed, whereas the EIA Directive requires it, for cases where the EIA is actually carried out.

Scoping is mandatory under the SEA but not under the EIA Directive. However, the determination of the scope of an assessment is also considered to be a helpful tool for the Environmental Impact Assessment. The tasks of the scoping procedure are evidently equivalent for both areas of application.

It is noticeable that the SEA Directive stresses the importance of juxtaposing several reasonable alternatives in order to ensure that the most environment-sparing option is chosen. This fact becomes particular conspicuous in the stage of the information compilation and report preparation. Additionally, the Directive puts emphasis on establishing a high level quality control, which aims at contributing to an environmental standard harmonisation across the European Union. Furthermore, not only mitigation but also monitoring measures are to be provided. In contrast, the EIA Directive goes for a high level of detail. For that reason it may also ask for technical documentation of the project in question. Eventually, both Directives state the minimum information that must be taken into account in the Environmental Impact Statement respectively in the Environmental Report.

Although both Directives ask for consultations of the public, of relevant authorities and, if necessary, of affected Member States, these consultations are conducted in different ways as outlined in the consultation chapter above. In the course of the Strategic Environmental Assessment authorities are to be consulted during case-by-case examinations and when the level of detail is to be determined. Consequently, the SEA Directive puts stronger emphasis on the integration of authorities during the editing and compilation process.

The EIA, as well as the SEA Directive demands the consideration of the gathered information (Environmental Impact Statement and Environmental Report) and the results of the consultations carried out on all levels when the decision is taken. Additionally, the SEA Directive necessitates informing the public, the authorities involved and the affected Member States, whereas the EIA Directive limits this obligation to the public and the Member States. Furthermore, the SEA Directive highlights once more the significance of considering a number of options, since it requires the presentation of reasons for the decision with particular respect to reasonable alternatives. Interestingly enough, only the EIA Directive demands informing the public and the Member States about envisaged mitigation measures, whereas the SEA Directive omits entirely this topic. However, monitoring measures are to be included in the final SEA decision statement.

The remaining compulsory information for the decision statement is practically identical in both Directives. Nevertheless, the strong emphasis on providing a transparent and concise documentation can be noticed especially in the case of the SEA Directive. However, it must be underlined that the SEA Directive leaves a greater margin of discretion to the Member States regarding the arrangement of details.

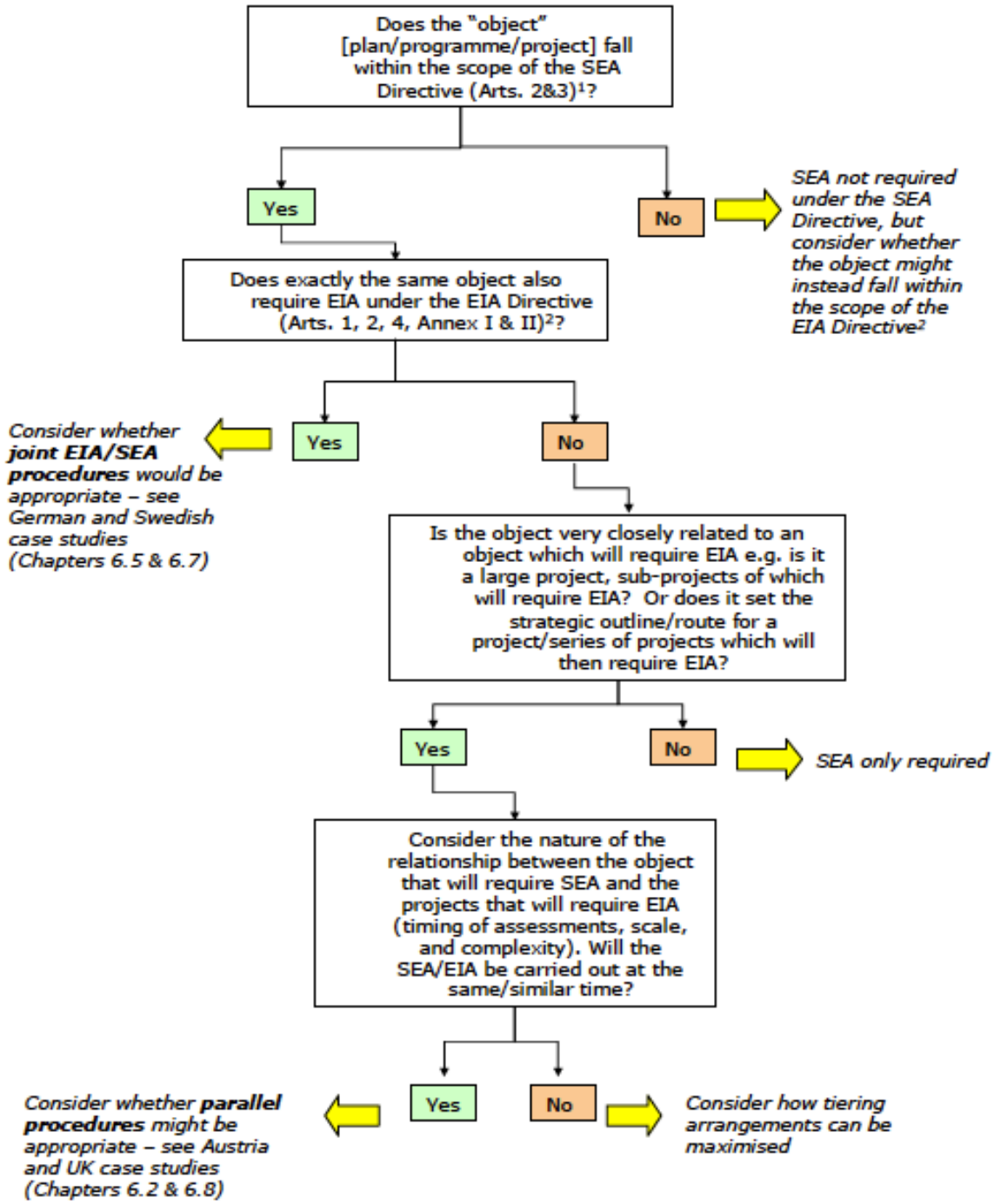
Eventually, the monitoring of plans or programmes is in fact only required under the SEA Directive. It was introduced to keep the respective plan or programme under surveillance during and after the implementation phase. Therefore, it aims at identifying adverse effects and at counteracting these effects (Sommer, 2005). The experience gathered by monitoring can be successfully used when new plans and programmes are conceived. Nevertheless, some Member States have made monitoring obligatory for projects for which Environmental Impact Assessment was necessary (European Commission, 2001b). This is considered good practice nowadays, since the advantages are considerable.

3.10. Determination of the required assessment

In the past chapters differences of requirements and of procedural issues were highlighted. This last one shall give an answer to the question whether the SEA or the EIA is required for a certain project, plan or programme under scrutiny. However, it is impossible to draw a clear-cut line between the fields of application of the two Directives, since overlaps do exist

in several areas. Hence, the following diagram can only give a rough sketch in order to provide orientation.

Figure 4 - Which assessment procedures apply? (Sheate et. al., 2004)



Notes:

[1]Or within the scope of MS legislation on SEA if this is broader than the SEA Directive

[2]Or within the scope of MS legislation on EIA if this is broader than the EIA Directive

Concluding the diagram above, the following documents and articles are to be consulted, if the respective competence is to be determined:

Articles:

- 2(a)
- 3(2)
- 5
- 6
- 1(2)

} SEA Directive

- 4
- Annexes I and II

} EIA Directive

In addition, the related guidances elaborated by the European Commission and by the Member States, but also the Case law established by the European Court of Justice are to be taken into account.

4. Overlaps between the EIA and SEA Directive

Overlaps between the two Directives exist in certain areas of application, as already implied in the past paragraphs. For instance, the realisation of large projects having more than local significance (Sheate et al., 2005) triggers both assessments and poses major problems likewise to developers and authorities. Member States are therefore in charge to establish a framework not only to comply with the legal prerequisites, but also to establish legal certainty. Moreover, Member States must aim at reducing the susceptibility for duplication of certain processes, as costs can easily be slashed by such means.

Both Directives are geared towards harmonization of environmental quality standards across the European Union. Nevertheless, the implementation of Directives into national legislation is left to the Member States, which naturally allows for differences in the arrangement of details. For that reason, overlapping areas between the Directives in question frequently also differ within the European Union.

Clearly enough, the definition of projects, plans and programmes represents the pivotal element of the overlap-problem. Whenever a proposal comes within the definition of a project rendered in the EIA Directive and simultaneously within the definition of a plan or programme set out in the SEA Directive, both types of assessment procedures are triggered. Whilst the EIA Directive defines projects in detail (EIA Directive, art. 1(2)) and provides explicit lists of types of projects (EIA Directive, Annex I and II), the SEA Directive merely sets out a very general definition of plans and programmes (SEA Directive, art. 2(a)). *"It is the advent of the SEA Directive that raises the question of definition, since certain plans may meet the screening criteria of the SEA Directive as well as of the EIA Directive, or only of the SEA Directive, or maybe do not meet the SEA Directive criteria at all"* (Sheate et al., 2005). Moreover, the notion of plans and programmes varies significantly across the Member States, which leads additionally to confusion regarding the application of the assessment types.

Sheate et al. (2005) undertook a study concerning the relationship of the EIA and SEA Directive. They compared the various situations in 15 Member States and conducted several case studies. As a result, five areas were identified, where overlaps between the two Directives are most likely (Sheate et al., 2005):

a. Wherever the amendment of plans is required in order to be able to apply for development consent for projects
b. Large projects consisting of several sub-projects
c. Large projects which reveal significance beyond local limits
d. When plans or programmes grant consent to projects
e. Tiering of EIA and SEA Directive

4.1. The requirement of plan amendments for development consent on projects

Difficulties arise when the object under consideration can be considered a "project" coming within the EIA Directive on the one hand, and simultaneously a "plan or programme" under the SEA Directive, on the other hand. Consider for instance the following situation: A project comes under Annex I of the EIA Directive and hence requires obligatorily an Environmental Impact Assessment. In the course of the realisation of this project the land use plan is to be amended, and additionally the plan modification is likely to have significant environmental effects on the environment. In this situation not only the EIA for the project, but also the SEA for the plan amendment are de rigueur. Sure enough, the same outcome can be expected, whenever an Annex-II-project exceeds certain threshold values or fulfils criteria set out by the Member States.

Here, the definition of plans and programmes in the SEA Directive is consequently the root cause of this overlap problem. In particular the SEA Directive provides 4 criteria in order to make the Strategic Environmental Assessment necessary:

1. The plan or programme must be likely to have significant environmental effects (SEA Directive, art. 3(1)).
2. The plan or programme is set for the following areas: agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning, land use (SEA Directive, art. 3(2a)).
3. The plan or programme *"sets the framework for future development consent of projects listed in Annexes I and II to the [EIA] Directive"* (SEA Directive, art. 3(2a)).

4. The plan or programme is likely to have effect on a Natura-2000-site protected under the Habitat Directive[38] and requires special assessments according to this Directive (SEA Directive, art. 3(2b)).

- Member States must determine whether plans and programmes are likely to have significant effects on the environment if (SEA Directive, art. 3(3)):
    - The plan or programme determines the use of small areas at local level
    - A plan or programme is altered
- Plans and programmes, which are not listed in Annex I and II of the EIA Directive, and which set the framework for future development consent of projects, are to be assessed by the Member States, whether these plans or programmes are deemed to have significant environmental effects (SEA Directive, art. 3(4)).

Member States deal in various ways with this problem. Austria, for example, opts either for the Environmental Impact or for the Strategic Environmental Assessment[39], but does not provide a joined approach. As a consequence, legal difficulties are created, since the requirements of one assessment method is not fulfilled. In contrast, Sweden provided a joint procedure for such cases (European Commission, 2009).

4.2. Large projects consisting of several subprojects

Extensive projects most often comprise of a number of smaller projects, which might be carried out by one and the same or by different developers. On the one hand, it could be necessary to assess such a project according to the requirements of the EIA Directive. On the other hand, the Strategic Environmental Assessment could also be required, since the decision on the project is aimed at granting development consent to the subsequent projects. Therefore, it is not astonishing that Member States can decide whether the object under consideration is regarded as a project or as a plan or a programme. This issue raises the same set of problems as in the case of plans and programmes, which effectively grant consent to projects.[40]

[38] Directive 92/43/EEC

[39] Most often the Environmental Impact Assessment is chosen in Austria.

[40] The splitting up of large projects into several smaller ones in order to avoid environmental assessments is definitely not regarded as a legitimate approach. The ECJ supported the opinion that salami slicing is not a legitimate strategy (European Commission v. Spain (C-227/01)).

4.3. Large projects which reveal significance beyond local limits

Projects, which touch not only local, but also regional or even national level, are not so infrequent as one might think. Particularly roads and railways connecting two or more provinces and thereby going beyond local borders often come within this category. Such projects are mostly subject to Environmental Impact Assessment, since they come within Annex I or II. However, these projects are also considered plans or programmes, since in some Member States they require an adoption by a legislative procedure.

In Austria, the following infrastructure projects were subject to Strategic Environmental Assessment because of the reasons given above: The construction of B317 Scheifling-Klagenfurt; Weinviertler Strasse, Stockerau-Staatsgrenze Kleinhaugsdorf; Marchfelder Strasse; AXX – Verbindungsspange A23-S1; Traisental Strasse (Arbeiterkammer Österreich, 2008).

4.4. When plans or programmes grant consent to projects

This type of plans and programmes give effectively consent on projects, which have to be realised in order to implement a certain plan or programme properly. Thus, the projects invoked and described in a plan or programme obtain general approval for their accomplishment. In fact, it seems to be superfluous to evaluate these projects with respect to an Environmental Impact Assessment, although this represents a formal requirement pursuant to the EIA Directive. Apparently, the scopes of the two Directives intersect also in this case.

In fact, this set of problems is very similar to the situation, when large projects consist of several subprojects (Sheate et al., 2004). Accordingly, the same approaches to remedy this overlap and duplication problem may be pursued.

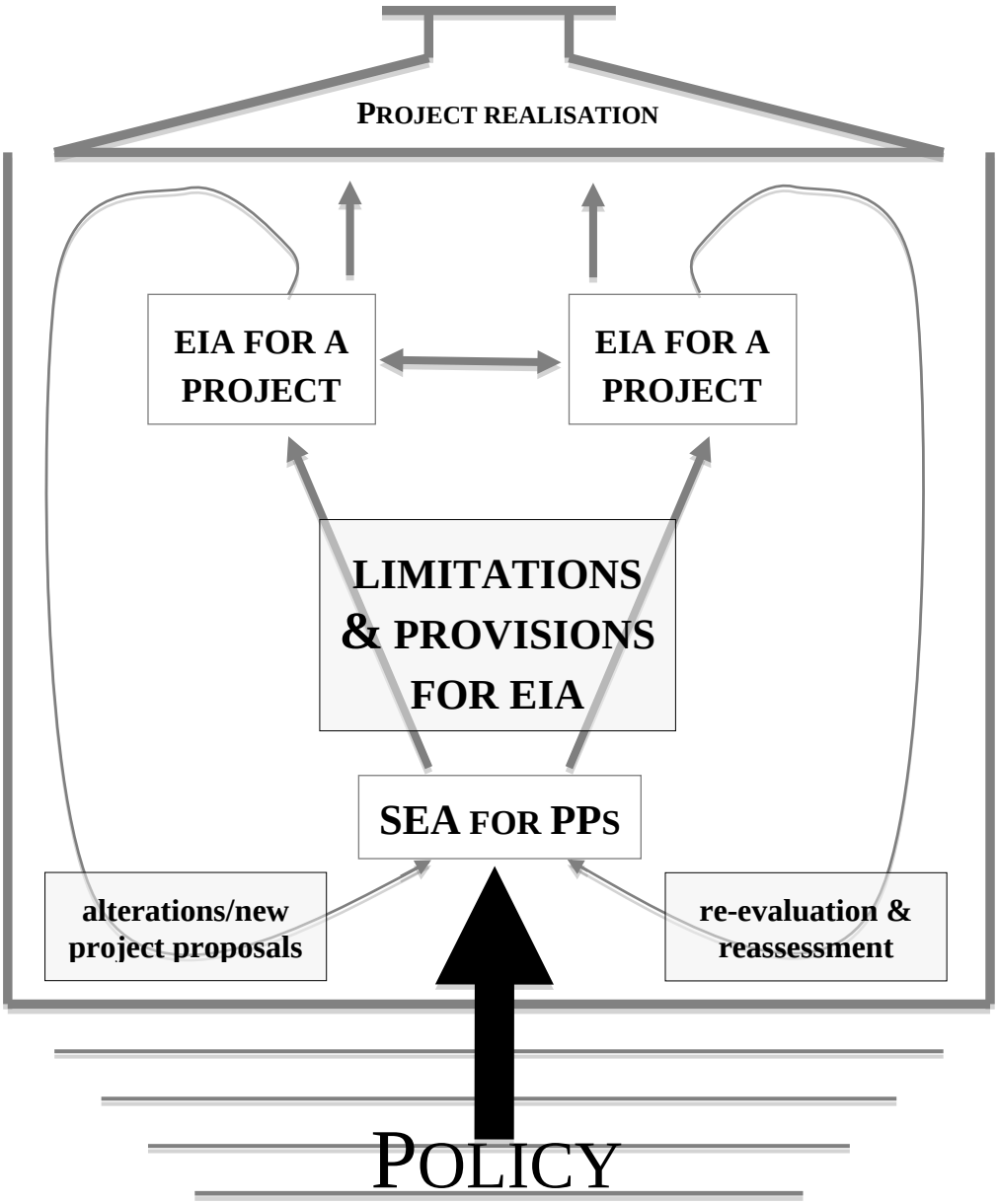
4.5. Tiering of EIA and SEA Directive

A major problem, which is common to all addressed overlap situations, is the hierarchical order of the Environmental Impact and the Strategic Environmental Assessment. The SEA Directive was adopted in order to remedy the late activation of the Environmental Impact

Assessment in the decision-making process. Correspondingly, the SEA should be carried out at an earlier stage of this process. Furthermore, the planning process along the two assessment methods was regarded as linear (Arts. et al., 2005). Theoretically, a SEA should precede an EIA. This fact can also be inferred from article 3(2a) of the SEA Directive: *"[…] an environmental assessment shall be carried out for all plans and programmes, […] which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EC*[41]*"* (SEA Directive, art. 3(2a)). In practice, the interactions and dynamics between SEAs and EIAs, do not allow for a linear approach. Frequently enough, difficulties, which were not taken into account in the originally proposed plan or programme, emerge on the project level and that may influence the outcome of the preceding SEA. For that reason, when carrying out the Strategic Environmental and the Environmental Impact Assessment permanent re-evaluation and reassessment of gathered information at the various stages are required (Arts et al., 2005).

[41] EIA Directive

Figure 5 - Tiering problem of Environmental Assessment procedures



For that reason, the decision-making process will be trapped in circularity, if Member States intend to fulfil the prerequisites of both Directives. Some Member States decided to use only either assessment method in order to avoid such a situation depicted above (Sheate et al., 2004). Though, this idea does not solve the problem, but rather raises the question of non-compliance. If one of the above stated overlap-situations emerges, it will not be possible to simply opt for either environmental assessment, since the provisions of both Directives are to be legally implemented. Therefore, it is of utmost importance to develop a procedure that

either clearly separates the scopes of the two Directives or provides coordination for both assessment methods.

4.6. Legal non-compliance with SEA and/or EIA Directive

Some Member States decided to use only one of the assessment methods, as mentioned at several occasions in previous chapters, although they know that they would not comply with some provisions of the Directives. For instance, France opted for sticking to the EIA-procedure for certain plans and Ireland applied the SEA for projects where previously EIAs were carried out (Sheate et al., 2004).

From a legal point of view there are three possibilities for a project, plan or programme (PPP):

1. The PPP comes within the scope of the EIA Directive
2. The PPP comes within the scope of the SEA Directive
3. The PPP comes within the scope of both Directives

Nevertheless, the question arises how much influence Member States can exert in determining whether a certain assessment method is to be applied on a specific project, plan or programme. Currently they have a lot of room for manoeuvre and are not charged for their legal non-compliance. However, the consequences for the environment and humans can be severe. If the ordinary EIA is applied to a plan or programme, unforeseen adverse effects will not be monitored and other reasonable alternatives will not be taken into account. These are two major strengths, which are simply undermined by the wrong assignment of assessment.

4.7. Summary and important remarks

This chapter described various situations in which overlaps of the EIA and SEA Directive are likely and consequently duplication of assessment processes is equally probable. Therefore, it is vital to determine the provisions of the Directives, which are responsible for the detected overlaps, in order to facilitate fast and inexpensive assessment procedures.

The most important provision in that context is therefore represented in article 3(2a) of the SEA Directive. This paragraph states that a SEA is required for all[42] Plans and Programmes, which affect the development consent of future AnnexI/II-projects. Admittedly this provision is slightly constrained by paragraphs 3 and 4 of the same article, however it appears to be so wide-ranging in scope that it has the following implications, when one leaves the exemptions aside:

1. A Strategic Environmental Assessment must be carried out before the EIA.
2. The SEA has to provide limitations and provisions for the EIA, which has to comply with them. This means that it is not possible for an EIA to alter decisions taken by a SEA. Otherwise the SEA would be useless and would represent only a further bureaucratic obstacle.
3. Plans or Programmes have to consider all possible alternatives. Only if there is absolute clarity about all options, the preparing authority can pick the appropriate solution and furthermore determine whether the adopted plan or programme contains the realisation of AnnexI/II-projects, which would trigger SEA.
4. One has to be careful when interpreting the latter item, since a strict interpretation could imply that Plans and Programmes would have to be regarded as a kind of five-year plan setting the framework for the realisation of AnnexI/II-projects for the upcoming years.

Due to the reasons stated above it appears to be plausible that the decision of the Strategic Environmental Assessment should be superior to the EIA. As a consequence, the tiering issue would be solved. However, article 11 of the SEA Directive effectively constrains the SEA's influence, and places it on the same hierarchical stage with the EIA. In addition, the theoretical hierarchy between SEA and EIA is clearly derivable: The SEA is superior to the EIA, since it provides the authority with a comprehensive overview. In praxis the opposite is the case, as the level of detail of an EIA is much higher than the level of detail of the SEA. Therefore, greater weight is attached to the EIA in the decision-making process. Finally, the coordination of the requirements of both Directives lies entirely with the Member States, whereby different approaches are followed leading to a wide variety of results.

[42] For all Plans and Programmes prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, telecommunications, tourism, town and country planning or land use (SEA Directive, art. 3(2a)).

Often overlooked but equally important is the fact that Strategic Environmental Assessments are only to be carried out for plans and programmes, which are required by legislative, regulatory or administrative provisions (SEA Directive, art. 2(a)). This implies that plans or programmes, which are conducted on a voluntary basis or in order to get a better overview on a situation, do not trigger a SEA. In contrast, the advocat general stated in its opinion in the case Terre wallone[43] that those plans and programmes shall be considered to come within the meaning of the SEA Directive, too. This interpretation is more appropriate since it corresponds to the overall goal of environmental assessment.

It appears to be necessary to remark that article 3(2a) does not allow for a conclusion by argumentum e contrario, which would mean that every Annex I and II project would originate from a plan or programme. In fact, it is not possible to derive a generally valid statement on this issue, since the implementation of the Directives varies across Member States and their respective national legislation. Nevertheless, projects can be identified, which come within Annex I or II but do not feature a preceding plan or programme, which was subject to a Strategic Environmental Assessment.

Finally, the legal non-compliance of several Member States with either of the Directives questions their genuine intentions. At the present time it seems to be mainstream to demand and to monitor stricter financial austerity measures, but to leave environmental issues to the Member States, which implement Community law in the way they like.

[43] C-105/09 and C-105/10

5. Examples for SEA and EIA in Austria

It appears to be reasonable to illustrate problems and difficulties by an example. For this purpose, the Strategic Environmental Assessment for the Viennese waste management plan and the EIA for the waste incineration plant Pfaffenau are chosen.

5.1. SEA for the Viennese waste management plan

Interestingly enough, the SEA for the waste management plan had been carried out before the actual SEA Directive was adopted. Hence, the city of Vienna pursued this SEA on a voluntary basis. A SEA team was created consisting of representatives of the administration, of the public and of experts in order to ensure public participation from the very beginning. It was also the SEA team that carried out the scoping procedure and that defined the following set of questions (Arbter, 2010):

- Which actions must be taken in order to avoid waste and to increase the recycling rate?
- Is it necessary to build new waste treatment plants in Vienna by 2010?
- Which type of waste treatment is optimal for the Viennese situation?
- How should the capacities of existing waste treatment plants be used?
- Which capacities are considered appropriate for the new waste treatment plants?

Thereafter, the various possible plans were compared and the essential results were compiled and bundled up. After having once again compared the bundled scenarios, the SEA team picked the one for which broadest consensus could be achieved.

For the sake of maximum transparency several criteria and a scale for the potential of adverse environmental effects was established. Additionally, the SEA team developed a monitoring checklist. The team had to check on the basis of this list whether assumptions and forecasts are accurate. If the team determined deviations, it would be possible to adapt the waste management plan accordingly.

The waste management plan contained the following measures (Arbter, 2010):

- Actions for the prevention of waste

- A recommendation for the construction of a biological-mechanical waste treatment plant
- A recommendation for the construction of a waste incinerator plant in Pfaffenau
- A recommendation for decommissioning of the older waste incinerator plants
- Monitoring measures

The third recommendation is of particular interest, since the influence of the SEA on the succeeding EIA for the waste incinerator Pfaffenau reveals the difficulties that come along with uncoordinated EIA/SEA application.

5.2. SEA impacts on the EIA for the waste incinerator Pfaffenau

The SEA for the waste management plan included all stakeholders (developer, involved authorities and the public) and brought them together. Fundamental issues such as the location and the size of the waste incinerator had already been discussed in the SEA team so that these deliberations were not required in the EIA. A further advantage of the preceding SEA was the fact that the quality of the Environmental Impact Statement was increased, as the developer could resort to SEA data.

The above-mentioned advantages are however outnumbered by the mentioned disadvantages, which were compiled by Arbter (2005). In this study, all stakeholders were interviewed and their opinions about the expedience of SEAs compiled and evaluated. Two arguments are substantial (Arbter, 2005):

- Tiering
- Duplication of processes

The tiering issue became apparent, when the agency “grüner Mistkäfer”, an environmental protection organisation, urged the decommissioning of another waste incinerator in Flötzersteig, while the EIA of the waste incinerator Pfaffenau was carried out. In fact, the decommissioning of this incinerator had been agreed upon in the previous SEA negotiations. However, the developer of the waste incinerator Pfaffenau, was not responsible for those

claims but had to cope with heavy resistance from that agency, because it felt ignored and betrayed[44].

Differences in the level of detail emerged, when the Environmental Impact Statement had to be prepared in the course of the EIA. The SEA data could be used, though the EIS required much more technical details on all levels of the assessment (Arbter, 2005). For that reason, the evaluation process had to be repeated, new additional data had to be gathered and again experts had to be consulted.

To sum up, particularly the public considered the SEA a major advancement, since it was integrated in the created SEA team from the very beginning. Though, the latter non-implementation of adopted measures deprived the public of confidence in the assessment. Consequently, a clear hierarchical order between the two methods would be desirable. Duplication of processes is to be avoided by introducing a procedure that fulfils the requirements of both Directives and that ensures legal certainty for authorities, developers and the public.

[44] In effect, the waste incinerator Flötzersteig is still in use. Though, some technical improvements were installed so that it complies with important emission standards.

6. Measures for clear separation or combination of both assessment methods

The previous chapters elaborated on the scope, the differences and the overlaps of Environmental Impact and Strategic Environmental Assessment. The following chapter aims at presenting solutions for the set of problems highlighted. There are several approaches already implemented in the various national legislations, but all of them exhibit certain shortcomings, particularly when attention is turned to legal compliance. For that reason, a new scheme is developed in this thesis that tackles all before mentioned issues and provides a viable solution. Nonetheless, the currently applied modi operandi are presented and their major shortcomings analysed. Of special interest in that context are the following solutions, which were identified by the study of Sheate et al. 2004:

1. Enhancement of EIA
2. Replacement of EIA by SEA
3. Parallel procedure
4. Joint procedure

The new scheme developed by this thesis introduces a third assessment method, which would be best described by an enhanced SEA. It allows for better differentiation and is based on 2 pillars:

- Joint procedure
- Enhanced SEA

But first of all the four currently applied methods are analysed in order to be able to pinpoint more easily the advantages of the newly developed mode.

6.1. Enhancement of EIA

In some Member States the EIA is applied for plans and programmes, since both the authorities and the developers are familiar with its application and its procedure. Particularly in France this practice is common, where EIA has a long well-established tradition (Sheate et al. 2004).

The enhancement of the Environmental Impact Assessment means that this procedure also fulfils the requirements established under the SEA Directive. If this was not the case, the enhanced EIA would not be compliant with the Community legislation. For that reason the scope of EIA procedure has to be extended:

1. The essential point is that the enhanced EIA has to be carried at an early stage. That means that attention must be paid to article 8 of the SEA Directive: The Environmental Report, the opinions expressed, the results of any transboundary consultations must be taken into account during the preparation of the plan and programme and before its adoption or submission to the legislative procedure (SEA Directive, art. 8).
2. Monitoring must be introduced as an additional step in the EIA procedure in order to detect unforeseen adverse environmental effects.
3. The obligation to consult the authorities involved in order to be able to prepare the Environmental Report.
4. The Environmental Impact Statement of the enhanced EIA must fulfil the requirements of the Environmental Report. In that context article 5(3) and Annex IV of the EIA Directive and article 5(1) and Annex I of the SEA Directive are to be consulted.
5. The obligation of the executive authority to prepare the Environmental Report according to the SEA Directive and the format of the Environmental Report are to be taken into account, as well.
6. Pursuant to the SEA Directive reasonable alternatives are to be considered.
7. The zero-option must be included as an alternative.
8. Scoping must be mandatory.
9. More emphasis must be put on the evaluation of cumulative effects

6.1.1. Difficulties

It appears to be easy to include monitoring, the consultations with other authorities involved and scoping into the EIA procedure, since these tasks do not clash with other obligations of the EIA Directive. Major difficulties arise with the requirement that the executive authority has to compile the Environmental Report. According to the EIA the developer has to prepare the Environmental Statement that is later submitted to the competent authority. For that reason, the executive authority would have to work closely together with the developer in

order to ensure the quality of the report and the compliance with the SEA Directive. However, in that case a tiering issue arises. It cannot be simply inferred from the Directives whether the developer or the executive authority is superior in this respective. From a theoretical perspective it is the executive authority that has to be superordinated. Otherwise the overall goal of the SEA Directive would be undermined.

Furthermore, reasonable alternatives are to be included into an enhanced EIA. Yet, who is in charge to determine these alternatives? Is it the developer or the executive authority? From the viewpoint of the SEA Directive it must be the executive authority, since it is the authority, which should obtain a comprehensive overview of the viable alternatives. In addition, the zero-option has to be taken into account, which actually seems to be more reasonable if the executive authority is charged with that issue.

Another difficulty is the fact that the enhanced EIA should be carried out at an early stage. Though, the EIA is a very detailed assessment method and its whole setup is conceived for assessing the finished project proposal.

All these mentioned difficulties make the adaptation of the EIA very difficult and it is hard to see how such an enhanced EIA version should comply with the SEA Directive.

6.2. Replacement of EIA by SEA

The only Member State that has replaced the EIA by SEA for so called strategic development zones is Ireland (Sheate et al. 2004). This approach is from the point of the author rather preposterous, since it seems almost impossible to establish compliance with the EIA Directive. If a certain project fulfils criteria coming within the EIA Directive, it will be effectively not possible to assess the project under consideration by means of the SEA. For instance, a project that is listed in Annex I of the EIA Directive must consequently be evaluated by an EIA.

6.3. Parallel procedure

Wherever a project, plan or programme comes within the EIA and SEA scope, a parallel procedure appears to be viable. This procedure relies on the voluntary conduct of SEA,

although the SEA Directive does not require it. Member States carry out the SEA simultaneously to the EIA. On the one hand this approach has a few advantages such as the fact that the voluntarily pursuit of the SEA establishes a comprehensive overview of the situation under scrutiny and enables a better coordination of the Environmental Impact Assessment. Additionally, the tiering issue would be solved by this procedure. There are three scenarios that might occur:

- The EIA is applied
- The SEA is applied
- Or the EIA is applied but the SEA is conducted simultaneously

In the first two cases there is no doubt about the application of the appropriate assessment method. In the third case, the tiering issue does not arise because the SEA is conducted on a voluntary basis and has therefore no legal relevance. On the other hand there are some difficulties, which come along with this method.

First of all, this approach would oppose the idea that the duplication of processes should be reduced or avoided. Carrying out the additional SEA would mean higher costs, longer assessment periods and more bureaucratic obstacles. Secondly, the SEA Directive states that the SEA has to be conducted for plans and programmes, which set the framework for future development consent of Annex I/II projects (SEA Directive, art. 3(2a)). Apparently plans and programmes are prepared at an earlier stage than projects. If the Directive is interpreted and applied strictly, SEA must precede EIA and therefore the SEA cannot be carried out at the same time.

6.4. Joint procedure

Another form of coordination is the joint procedure of EIA and SEA. It represents the possibility to create an approach that fulfils the requirements of both the EIA and SEA Directive at the same time. The overall objective is to put the assessment methods in a clear hierarchical and temporal order, so that confusion about their application is foreclosed. It is in fact the strategy, which is considered among experts to be the most promising, particularly because of the solution of the tiering problem (Sheate et al., 2004).

Nevertheless, it is not a solution for everything. It cannot cope with the four remaining overlap problems[45]. Whenever one of these situations arises, the joint procedure does no longer dispose of its major strength, the exact hierarchical order, and becomes entangled in circularity.

6.5. Combination of enhanced SEA and joint procedure

So far, there has been no approach that would remedy all problems. However, there is one left that appears to satisfy all purposes. This procedure differs strongly from the previous strategies, since it does not try to create one single procedure, which aims at covering all situations, but it provides instead different procedures for different situations. For that reason, it is important to keep the number of the various procedures as low as possible, since otherwise confusion would be the predominant effect.

The discussion of the previous chapters might have given the impression that the question which assessment method should be applied arises more often than not. In fact, this is not true, since there are many situations in which there is no doubt about the application of either EIA or SEA. In those cases both methods work in a perfect way. However, also overlapping situations were identified and discussed in this thesis in order to be able to develop an approach that is able to cope with them.

The root cause for overlapping situations is the vague definition of plans and programmes so that some types of projects come within the scope of the SEA Directive. In that case both assessment methods could be applied and the question arises which procedure ought to be preferred. This thesis comes to the conclusion that in the case of overlap the more extensive procedure should be carried out staying with the motto “in dubio pro ampliore (examinatione)”. However, this cannot be achieved without adaptation of the Strategic Environmental Assessment, as its conduct must comply in these situations with the EIA Directive, too. On that account, an enhanced SEA is to be introduced that could entirely solve the overlapping issue.

[45] 1.Wherever the amendment of plans is required in order to be able to apply for development consent for projects. 2.Large projects consisting of several sub-projects. 3.Large projects which reveal significance beyond local limits. 4.When plans or programmes grant consent to projects.

Indeed, it is much easier to enhance the SEA procedure so that it would comply with the provisions of the EIA Directive, because only two major topics have to be addressed:

1. Who has to carry out the enhanced SEA?
2. The level of detail of the SEA procedure must be adapted to the provisions of the EIA Directive. Particularly article 5(3) and Annex III/IV are to be taken into account in order to include the provisions for the Environmental Impact Statement in the Environmental Report.

The first issue could be resolved by opting for a procedure in which the executive authority takes the lead, and the developer submits the relevant information to the authority. It appears to be reasonable to establish a system in which authority and developer work closely together.

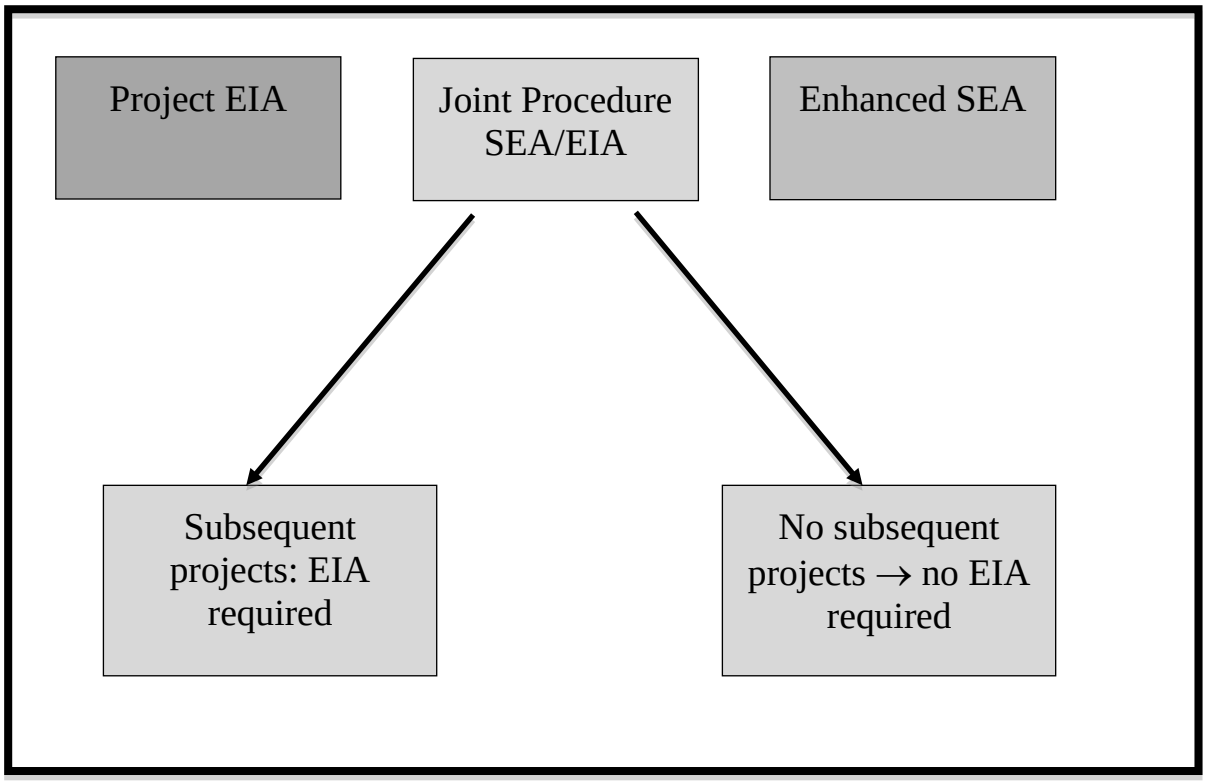
The second aspect is just a matter of formality, because the level of detail of the Strategic Environmental Assessment has to be increased. The criteria of the EIA Directive have to be taken into account and the enhanced SEA must include a technical summary that satisfies the EIA standards.

By means of the enhanced SEA the overlap problem seems to be resolved. For all other situations the EIA and SEA are applied as before, yet put together into a joint procedure in which the hierarchical order is out of question. It should be possible to alter technical details of a project on the EIA level, but the overall provisions and limitations of the SEA ought to be abided by.

In conclusion, the enhanced SEA approach relies on the following three pillars, which allow effective assessment and legal compliance at the same time:

- EIA
- Joint procedure
- Enhanced SEA

Figure 6 - Three pillar model (EIA - SEA/EIA - enhanced SEA)



First of all, the EIA is carried out for all projects where its competence is undisputed and the project under scrutiny does not come within the scope of the SEA Directive. Secondly, the joint procedure covers all situations where there is no doubt about the sole competence of the SEA Directive or where the plan or programme under consideration sets the framework for future development consent of Annex I/II projects (SEA Directive, art. 3(2a)). This assessment would be appropriate for:

- large projects consisting of several sub-projects
- for plans and programmes, which grant consent to projects
- for plans and programmes, which do not involve the realisation of subsequent projects

Finally, the enhanced SEA is applied wherever the amendment of plans is required to be able to apply for development consent for projects. Additionally, it would be a practicable method to assess projects, which reveal significance beyond local limits. If the enhanced SEA proves successful its range of application could also be extended.

7. Conclusion

This thesis identified the scope, the differences and overlaps of the EIA and SEA Directive in order to be able to separate the two instruments properly. The development of a common framework for environmental impact assessment took several decades, yet the adopted directives are still under constant revision, since environmental issues became essential and environmental protection found its way into European legislation. The EIA and SEA Directives both play a crucial role in the balancing of economic ambition and the protection of the environment. Particularly in the context of the overlap issue, the two Directives caused confusion among the key players: developers, assessing authorities and the public. On that account the provisions of the Directives were disentangled and the key areas for renewal were highlighted.

There are a lot of similarities, since both Directives are revolving around the same issue: The assessment of actions with regard to their adverse effects on the environment. However, the Directives are operating on different levels and tackle the issue from two different perspectives. For that reason a precise distinction is absolutely necessary. Not only because of the comprehensive protection of the environment, but also to ensure legal certainty for developers and authorities. Particularly the last argument is critical, as the application of the wrong assessment procedure could lead to the withdrawal of the permission for the realisation of a project, plan or programme.

The EIA Directive was primarily adopted in order to provide a common, early stage assessment method that evaluates likely significant effects on the environment caused by certain types of projects. This approach reflected the idea of the precautionary principle, which can be interpreted as the pursuit of the European Union to prevent rather than counteract the creation of pollution or other harm to the environment.

The SEA Directive was designed to integrate environmental issues into the decision-making process of plans and programmes. For that reason, certain plans and programmes likely to have significant effects on the environment are subject to a strategic environmental assessment. The SEA Directive does not only contain provisions related to the framework and to the rules of engagement, but it also gives some indication regarding the SEA procedure itself.

Additionally, an example explained vividly the set of problems arising when the provisions of SEA and EIA clash with each other. Especially the public felt on the one hand well integrated into the decision-making by the SEA, but it was very disappointed when the result of the SEA negotiations were abandoned during the succeeding EIA for a waste incinerator.

The study of Sheate et al. (2004) represented the basis for the development of a new approach, since it identified the five major overlap issues:

1. The requirement of plan amendments for development consent on projects
2. Large projects consisting of several sub-projects
3. Large projects which reveal significance beyond local limits
4. When plans or programmes grant consent to projects
5. Tiering of EIA and SEA Directive

The provided new approach combining an enhanced SEA, a joint procedure between SEA and EIA, and an EIA, is capable to deal with the displayed set of problems and to provide a common procedure that is applicable throughout all European Union Member States. The question who has to carry out the enhanced SEA could be resolved by opting for a procedure in which the executive authority takes the lead, and the developer submits the relevant information to the authority. It appears to be reasonable to establish a system in which authority and developer work closely together. The adaptation of the level of detail is just a matter of formality. The criteria of the EIA Directive have to be taken into account and the enhanced SEA must include a technical summary that satisfies the EIA standards. This method allows for harmonisation of environmental assessments without altering the Directives.

It is of particular importance that legal uncertainty and duplication of processes would be prevented, if the developed approach was implemented in all EU Member States. Pleasant side effect would be the increased transparency of the decision-making process and the comparability across all Member States. Finally, it is apparent that this development would have to be prompted by a recommendation of the European Commission that would call upon all Member States to implement this approach simultaneously.

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