

discussion paper

52

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The History of Strategic Environmental Impact Assessment (SEIA) in the EU

EURES discussion paper dp-52
ISSN 0938-1805

1996

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This discussion paper was written within the framework of the research project "The Incorporation of the Environmental Dimension into Freight Transport Policies. A comparison of six countries and the EU". It was carried out by the EURES-Institute for regional studies in Europe (Freiburg/ Germany), by CE (Centre for Energy Conservation, Delft/ Netherlands), AKF (Institute of Local Government Studies, Kopenhagen/ Denmark), IEEP (Institute for European Environmental Policy, London/ UK), SRS (Studio Ricerche Sociali, Firenze/ Italy), INFRAS (Zürich/ Switzerland). The project was coordinated by the EURES-Institute.

The project was sponsored by the research programme "SEER" of the Commission of the European Union (GD XII, Brussels), by the Swiss, German, Dutch and Danish governments and the Tuscany Region.

This paper is chapter 4 out of the EU-study of the above mentioned project.

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1 Introduction

This is the second of two case studies in the framework of a research programme on the “Incorporation of the Environmental Dimension into Freight Transport Policies in the EU”. The first case study analyses the attempts to internalize external costs into freight transport.

Both policy analyses apply a special model - the “temporal sorting” or “garbage can” model. This is a tool to explain the background of the “agenda-setting” process. Both instruments for the incorporation of the environmental dimension are still in the initial phases of the policy-making process. Up to now (August 1995), no official Commission proposal on SEIA and no official SEIA on the Trans-European Networks exist. According to the temporal sorting model, politics do not function in a clear sequential or rational order (from problem-perception over estimation to selection and decisions). Solutions and instruments, actors’ attention to a specific issue and problems may be characterized as rather independent streams floating around. Occasionally they come together, but often they do not. Sometimes existing technological solutions may look for new marketable problems. In certain constellations, a problem may attract the attention of strategic actors. In other situations, their attention is occupied with other issues. There might be problems without solutions, actors without interest for a specific problem, or solutions that do not find strong protagonists. Different processes and initiatives may take place at the same time. Therefore, a simple chronology may be not sufficient to give an accurate picture of the agenda-setting process.

According to HUBER (1995), one can identify several networks, such as the definition network, the solution network, and the decision network. The definition network focuses on the identification of problems. It is most likely to be natural-sciences based. In this “network”, a debate over the “definition power” (Beck 1986, 1988) takes place. This means who defines what the problem is and what it is not. The solution network analyses alternative options and offers solutions. This network selects viable options from the “market of ideas and concepts”. Lastly, the decision network makes the decisions. All three networks must mobilize their resources to promote a policy. Therefore, proper timing and the coincidence of several independent factors may explain why a successful policy can be solved.

According to this model, a solution has chances to come on the agenda if (see Huber 1995):

- there is a high level of attention for a certain issue (i.e., caused by a certain event),
- actors who want to promote a certain policy have strong resources (economic, social, political, symbolic),
- and technically viable solutions and instruments are available.

Such coincidences of different factors is sometimes called "policy window" (Kingdon 1984). As observed, several initiatives and attempts may be started before a "policy window" may be actually found.

The following case study reconstructs the gradual evolution and devolution of the three active SEIA networks:

- the expert network proposing and developing the SEIA concept (solutions),
- the problem-oriented networks asking for an assessment methodology for European policy plans is often related to infrastructure policies (problems),
- and the cautious attempts of the Commission to start legislative proposals since 1989 (decisions).

An overview is given in Figure 1.

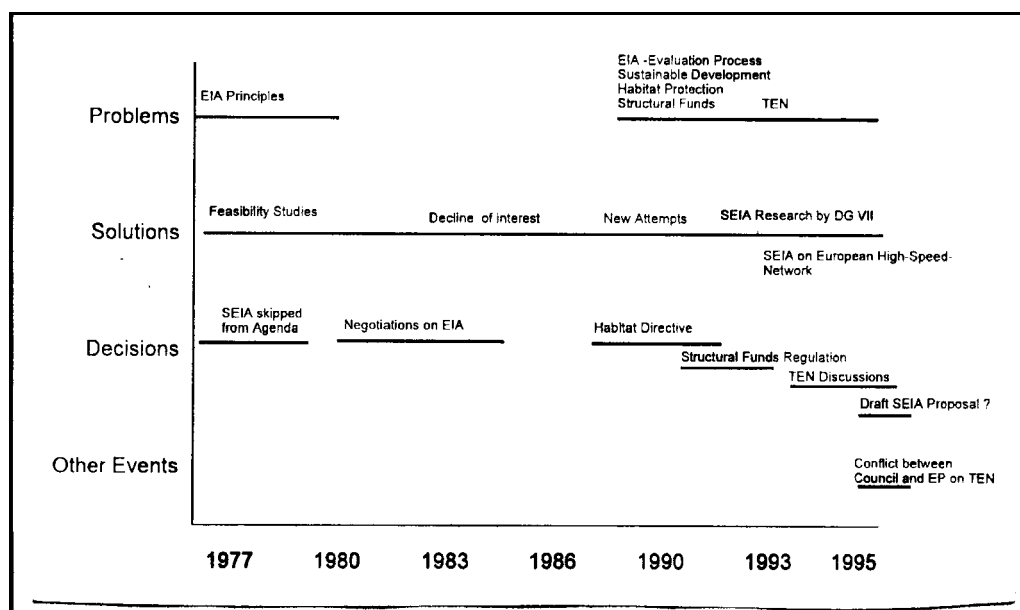


Abbildung 1 The history of SEIA 1977-1995

The analysis will focus on the legislative process for the introduction of SEIA, as well as the link to the Trans-European Networks.

The need for an Environmental Impact Assessment (EIA) beyond individual projects was acknowledged by small expert groups as early as 1974, when the debate on environmental impact assessment began at the EC level (Héritier u.a. 1994: 305). From the beginning, it was recognized that the scope for an EIA project was too limited. Therefore, it was decided that legislation for an impact assessment of policies, plans, and programmes had to be evaluated.

The first step included writing preparatory studies on the possibilities to evaluate the impact of policies, plans, and programmes as early as 1977. At the decision-making level, the Commission postponed legislative activities after first experiences with the planned EIA directive were implemented. In 1985, the EIA directive was decided, and was to be transposed in national legislation in 1988. Since then, the Commission started working on new legislative activities. Elements of EIAs were included in two recent legislative works: (1) the Habitat Directive in 1992; and (2) the reformed Structural Funds regulation in 1993. The lower Commission services made several attempts to draft proposals, but they were not accepted by the Commission. In 1995, a new initiative for a directive proposal had been started.

2 The Solution

The idea of SEIA derives from “participatory planning” concepts from the early-1970s. Planning was not perceived as a hierarchical top-down process, but as a process that required the “feed-back” and the “checks and balances” by those involved (Interview 21). Furthermore, SEIA was conceived as a tool to strengthen the “precautionary” principle, and a preventive approach (Cupei 1986).

SEIA was defined as a formalized tool to incorporate the environmental dimension at all levels of the decision-making process - from the formulation of general policy targets to the monitoring of project implementation (Lee 1979: 31). The early participation of the environmental authorities and the general public was the central concern. Project EIA was just a part of this wider concept.

The impact study itself was perceived as a part of this wider planning approach as well. It was acknowledged rather early that it would be easier to assess the impact of single projects rather than the impact of strategic decisions. Therefore, a gradual approach was recommended, starting with the project level and slowly incorporating the higher strategic levels as methodological expertise would be made available.

After a decline of interest in SEIA, scientific interest in SEIA re-emerged in the early-1990s. A SEIA was introduced in several non-European countries and in the Netherlands (which was documented in a special edition of Project Appraisal on SEIA in 1991). It became obvious that considerable evidence on SEIA had been accumulated, and proved the viability of a SEIA.

This chapter reviews the development of the discussion of the networks from 1977 to 1995. It shows that over this period, the “solution” has become ripe for application. Yet, it was found that SEIA returned to the political agenda only after problems emerged which raised decision-makers’ attention.

SEIA may be applied to physical plans (which have a spatial dimension), to sectoral plans (transport, energy, waste), or to economic policies or plans (Lee/ Wood 1977: 15). In the context of this study, the methodological discussion in the transport sector is of special relevance. The methodological discussion on this issue takes place in other networks than the SEIA discussion.

2.1 A definition: Elements of a SEIA

In theory, SEIA assumes a rational and hierarchical policy planning sequence from the formulation of general policy principles over the definition of specific objectives and the formulation of policy plans and programmes to their implementation by different projects. The different levels are defined as policies, plans, and programmes (Lee 1979; OECD 1994q: 28). On the policy level, strategic objectives are formulated. Plans define specific targets, priorities, and schedules. Programmes are an aggregation of interlinked projects. The principal idea of a SEIA is that the environmental dimension should be taken into account on every level of this planning and decision-making process. In this sense, SEIA contains participation by environmental authorities and the public before decisions are made at each level. It also creates an assessment methodology to study the impacts. In practice, planning may follow a “bottom-up” process, as well as a “rational top-down approach.” It may even contain elements from both in the framework of a “counterstream” (Gegenstrom) approach. Such practical theoretical deviations may create problems for the practicability of SEIA (Lee 1979: 12; Lee/ Wood 1977:6). SEIA is not a new planning approach, but rather enlarges existing procedures by using a complementary element.

The reasoning behind such a process-oriented approach is that decisions at higher levels of the hierarchy predetermine the scope of all or most actions at the lower levels. The scope of alternatives is smaller on the project level than on the policy level. In this sense, SEIA is a method to deepen the environmental scope of decisions, in comparison to a project-oriented impact assessment (according to the concept on depth and scope of environmental policies: see Prittwitz 1990 and 1994). It is a necessary part of a preventive environmental policy approach - even if it is only a tool for information and participation, and not a “problem-solving” tool in the stricter sense.

Beyond this general idea, SEIA has not been strictly defined. SEIA may reach from simple consultation-mechanisms and checklists, like the “Green Star” from the Commission, or the planned Environmental Test in the Netherlands (Advisory Committee on the Environmental Test 1993) to rather formalized procedures, which have systematic similarities to the EIA-procedure (Cerney/Sheate 1992). Some SEIA’s work with relatively simple checklists, while others apply comprehensive scenario methodology. In its most recent review on SEIA practice, LEE/HUGHES (1995: 36) discovered “great variability” in SEIA-practice. Compared to a normative framework, SEIA in practice is not complete. Some authors tend

to formulate a “minimum” and a “maximum” impact scenario (Falque 1995). The minimum scenario is rather an interministerial consultation procedure, whereas the maximum scenario is a well-established participation and consultation procedure.

A “maximum” version has been developed in the early reports for the Commission (Lee/Wood 1977; Lee 1979). Important elements for a strong SEIA must adhere to the following six principles:

- Process character: SEIA is an information-gathering instrument to prepare decisions. Therefore, it should be applied throughout the planning process, from the beginning to the end, before decisions are made.
- Complete assessment: SEIA should take all relevant impacts of strategic decisions into account. It should not only analyze local, short-term, and/or land-use and habitat questions, but it should also look at global, indirect, long-term, and cumulative impacts. The scope of analysis should be broader and based on strategic indicators (in comparison to a project related EIA).
- Target setting: environmental assessments can only be checked at the background of environmental and socio-economic objectives, which are made transparent.
- Evaluation of alternatives: SEIA can only fully exploit its potential when alternative options on the strategic level have been evaluated. This makes the difference between a conventional and a environmentally-friendly alternative transparent.
- Participation: Environmental authorities and the public should be consulted during the early stages of the decision-making process to include their opinions and arguments. Their concerns may influence decisions. Assessment reports, therefore, should contain a “non-technical summary” and should make essential methodological assumptions transparent.
- Monitoring: the SEIA process should not end with a decision, but monitor as well as implement and compare actual impacts with predicted impacts.

According to the literature, a SEIA report has several essential steps (which are aggregated in different ways, see: EG-Kommission 1994m; Therivel u.a. 1992 and Therivel 1993; Falque 1995; Lee 1982; Glasson u.a. 1994; Bina u.a. 1995). Our synopsis is presented in Table 1 below.

Essential Steps of a SEIA	
1.	<p>Screening</p> <ul style="list-style-type: none"> Q Determination of the need for a SEIA Q Preparation of Studies Design/Work Programme Q Determination of the Objectives of the policies, plans, and programmes (PPP) and other environmental-related objectives Q Information on the State of Environment in the affected areas
2.	<p>Scoping</p> <ul style="list-style-type: none"> Q Setting boundaries Q Description of the “base line” Q Selection of Relevant Indicators Q Definition of Alternatives Q Consultation on the scoping decisions made
3.	<p>Assessing</p> <ul style="list-style-type: none"> Q Establishment of a Data base Q Prediction of Impacts Q Evaluation of impacts Q Assessment of Alternatives Q Proposals for Mitigation
4.	<p>Incorporating the Decision-Making Process</p> <ul style="list-style-type: none"> Q SEIA - Report and Recommendations Q Non-Technical Summary Q Consultation of the Public and of Environmental Authorities Q Decisions
5.	<p>Monitoring and Feed-Back</p>

Table 1 Essential Steps of a SEIA

As seen from this overview, the impact study itself is only a part of a SEIA. SEIA is a process which requires consultation on at least two levels: the scoping level and the decision-making level. Furthermore, it is evident that SEIA has a rather open procedural frame in which a number of divergent assessment methodologies may be applied (overviews: by EU-Kommission 1994m, Lee 1982; Lee/ Walsh 1992: 134f; OECD 1994q: 39f). According to the type of plan or programme, assessment methodologies may be simple checklists, literature surveys, expert consultation systems, or more sophisticated scenario modelling techniques or even aggregation systems (by weighing different impacts or monetarizing). In other words, SEIA is a

rather open frame, which can be filled by a multitude of approaches. This implies a number of opportunities that may influence the quality of outcome.

2.2 SEIA-Expert Networks 1977-1995

The idea of a Strategic Environmental Impact Assessment (SEIA) for strategic decisions can be traced back to EIA discussions. First reports on SEIA for the Commission were published in 1977 by a research team at the University of Manchester in England. This team strongly influenced and coordinated the European EIA discussion over the past twenty years. Since it was founded, the EIA Center in Manchester coordinates EIA activities throughout Europe.

The EIA Center has been responsible for several preparatory studies to the Commission before it made its first proposal on EIA in 1980. It actively developed training courses for EIA officers and coordinated the EIA review process, which started in 1990. Furthermore, it prepared feasibility studies for SEIA in 1992 and 1995 (Hughes/Lee 1995). One can observe a considerable degree of continuity among small international expert networks, not only at the University of Manchester, but also in other countries during the review period. Some of the “founders” of EIA in Europe became active in the preparatory process on SEIA in the early 1990s. Within the Commission services, there has been a long-term personal continuity until 1993. Consequently, this allowed strong working relationships between expert networks and the Commission services. SEIA had been a part of the strategic thinking with this network from the beginning. But attention shifted to the project-related EIA during the difficult decision-making and implementation phase between 1980 and 1990.

SEIA returned to the experts' agenda in the late-1980s, when the first review process of EIA started and expert interest widened. As seen from the publications listed in the bibliography of the EIA Center in Manchester, scientific interest into SEIA became stronger since 1990. International organizations, like the World Bank (1991), the United Nations Commission for Europe (ECE 1992), and the OECD (1994) initiated workshops and published reports using sophisticated methodology. In 1992, 1994, and 1995, the Commission published reports on state-of-the-art SEIA. Reviews were prepared in France (Falque 1991), the Netherlands (Verheem 1991), and the U.K. (Therivel 1993; Therivel 1994; Wood u.a.1992; Cerney/Sheate 1992). These reviews focused on the experiences of the leading countries in SEIA, such as the U.S., Canada, New Zealand, and the Netherlands.

On the European level, the expert network did not have a broader audience until the end of 1994. In early 1995, environmental organizations, such as Greenpeace and Transport and Environment, asked for a SEIA for the Trans-European Networks. They found support in the European Parliament (see later). At the national level, environmental organizations brought the expert discussion earlier on the political agenda, especially in the U.K. and the Netherlands.

The impact of new transport infrastructure was discussed in other expert networks. These transport expert networks focused their work on methodological questions of assessment. They can be described as more pluralistic, and nationally-fragmented than the previously described EIA network. In July 1994 an subgroup of the Motorway Action Group (Aire), an expert group for the Commission on the Trans-European Networks, finished an internal report for DG VII on the state-of-the-art SEIA in member countries. The report concluded that so far little experience exists with SEIA's on transport infrastructure investments in member countries. Another report for DG VII analyzed the state-of-the-art on "Multicriteria Assessment for Infrastructure Investments (EURET 1994), and included a chapter on SEIA. A further study in the framework of the third transport research framework programme on "Strategic Assessment" has been finalized mid-1995, but has not been published yet. Furthermore, the Directorate General for Transport (DG VII) supported some research and coordination, and included this work into the framework of the Cost 328 programme, the Fourth Framework Programme on Transport Research, and other research activities. Those different research activities were not directly linked to each other.

In the terminology of the "temporal sorting model," one can argue that the idea of SEIA "floated" around in a small experts network for nearly twenty years. There were three occasions in which SEIA found a wider audience: (1) before the Commission proposal on a EIA directive in 1980; (2) when a draft proposal of the Commission became public in 1991; and (3) in the context of the discussion on the environmental impact of the Trans-European Networks in 1994. The SEIA networks and transport experts networks working on EIA of infrastructures were scarcely linked to each others.

2.3 Problems with the Solution

The early reports on SEIA, which were completed for the Commission in 1977 and 1979, already identified two major types of problems with SEIA: (1) the methodological problems of assessment; and (2) its political dimension.

First, SEIA as a procedure works best in the framework of a rational and hierarchical top-down planning process. However, planning often is more chaotic than assumed in the ideal SEIA system. For instance, projects often find strong political support; the plan or policy is only an *ex post* justification of the decisions already made. Similarly, plans are not implemented due to local resistance (Lee/Wood 1977: 6f). More chaotic planning, in reality, raises doubts if the assumed advantage of SEIA to widen the scope and depth of the environmental dimension of decisions really does work.

Economic plans often have a rather decentralized and informal character. They are indicative - leaving much scope for decisions at the lower levels. They often do not have clearly defined spatial dimensions. This inaccurate baseline creates difficulties for assessment (Lee 1979: 12). Since the "cause" is not clearly defined, the impact may not be either. Scoping will be one of the most difficult tasks. In addition, the availability of data may create problems because a gap exists between strategic concepts and the actual decisions (Bunge 1992: 10).

Forecasting methodology and scenario techniques, as well as other planning methods were available at this time, yet there was little experience with the use of environmental indicators in such planning framework. LEE (1979: 56), therefore, concluded: "Given the extent of deficiency to be corrected before EIA can be effectively integrated into economic planning, the formal application of EIA system to economic planning is not immediately feasible on a Community wide basis."

Some authors have been optimistic that the methodological problems could be resolved, and that there would be no sufficient reason for non-action (Lee/Wood 1977: 8). Nevertheless, the early studies recommended a gradual approach - which tried to reverse the sequence of required actions. EIA should be introduced on a project level, while for the higher strategic levels the accumulation of experience by pilot projects was recommended (*ibid.*: 10).

In its first review on the application of SEIA by the Commission 15 years later, the authors argued that some experience with SEIA was available (Lee/Walsh 1992: 127f). There was some experience of SEIA on land-use planning in Germany, France, and the U.K. The Netherlands already had introduced SEIA legislation for certain programmes and plans in 1986. A survey on SEIA practice for the Com-

mission (EG-Kommission 1994m: 37) concluded that SEIA is feasible. The survey proposed to be very selective and pragmatic in the choice of indicators. Furthermore, they should correspond to the strategic character and the abstract level of the decisions. Pragmatism and this type of selection would infer that costs and time-requirements for a SEIA would be reduced and delays avoided. The problem of insecurity could be overcome by scenario techniques using these methods.

Thus, the authors (Lee u.a. 1995) were more optimistic on the potential of SEIA in 1994/1995. The solution was perceived to be technically viable. The problems identified at this time were political.

Secondly, as confirmed in their last study on SEIA in 1995 (Lee/Hughes 1995; but already mentioned in Lee 1979: 21), there is a heterogeneity of planning systems, both within member countries, between different sectors and policy levels, and between member countries. Differences are even higher between sectors than between countries (Lee/Hughes 1995: 13). Therefore, any legislative activities by the Community would require a high degree of adaptability and flexibility. In other words, any legislative activity would take place only in an open and general framework, leaving much space for sectoral and national interests.

SEIA should be a quasi-voluntary instrument that relies on informal feedback mechanisms, which could gradually improve its quality. Such feedback mechanisms might result from the interaction with the public, as well as by growing expert knowledge and improving professional standards (Interview 21). One must emphasize that even the last report from 1995 did not recommend legislative activity by the Commission, but only a leadership role in pilot projects, technical assistance, and information exchange.

One major political problem of SEIA was identified as opposition from decision-makers (Lee/ Walsh 1992: 133). Often the process of preparing strategic decisions is confidential. SEIA would conflict with confidentiality. Furthermore, it would interfere with the discretionary power of decision-makers. Decision-makers fear a "curtailment of competences" by the well-informed interference of the public (that means environmental organizations) and environmental authorities. In some countries, SEIA would imply legal actions further restricting the freedom of decision-makers and planners.

On the other side, experts express fears that SEIA may be captured by planners who have a vested interest in the promotion of a plan (Falque 1993). SEIA may be abused to legitimize plans, even if they may have a negative impact on the environment. This may be the case under the following conditions: If the methodology is controlled by the planning authority; if the experts are paid; and if the interested public has limited expertise to control the quality of the assessments. Weaknesses

of SEIA practice, as observed by HUGHES/LEE (1995), may contribute to this promoter-driven abuse of SEIA. These authors observed that there are three politically sensitive elements of SEIA, which are the weak points in practice: the analysis of alternative options, the public participation, and the incorporation into the decision-making process.

The SEIA experts are well aware of these risks. They have emphasized the process-oriented and participatory characteristics of SEIA, and the need for a pluralistic expert system. Therefore, an independent "expert review" of SEIA was recommended to avoid self-certification and transparency into the methodological assumption of SEIA (Lee/ Walsh 1992: 133).

SEIA has made considerable progress since the first and the latest feasibility reports. The latest reports confirmed that despite some problems, SEIA would be feasible as long as sufficient methodological experience would be made available.

2.4 Evaluation Methodology for Transport Infrastructures

As shown above, expert networks who are discussing the impact of transport infrastructures are much more disperse. The report from the "AIRE-Group" (1994) made a list of potential action and formulated some general guidelines for SEIA on the TENs:

- It should include a scenario-method which allows a sensitivity analysis for different action options: The impact of a "minimalist scenario" and "zero-options" should be inquired. The group recommends a reference, a medium, and an extra road scenario.
- Trade-offs and synergies between different options should be identified.
- They should evaluate global, regional, and local impacts of environmental risk, whereas direct, indirect, and cumulative effects, as well as local and global effects should be analyzed;
- Corridor analysis should be conducted, whereas the impact on modal split is inquired.
- The analysis should have a process-oriented design, which will monitor plans throughout the different phases and which allow public participation.

- It should use models for the development of transport demand, including "autonomy effects" and "interactive effects" (i.e., induced traffic by new infrastructures).

Existing literature on those aspects suggests that some experience is available, but that assessments on infrastructure investments raise a number of methodological disagreements.

There are three areas of problems, which shall be discussed more deeply: the level of analysis, the modelling of impacts, and data availability and aggregation.

2.4.1 Level of Analysis

SEIA may focus on the "system level" of a whole infrastructure network or on different "corridors" (OECD 1994q: 37). The system level is much more difficult to assess than the corridor level, since the interaction of variables is more complex. Nevertheless, previous experience exists at both levels (OECD 1994q).

On the system level, an impact assessment of the Trans-European High Speed Train (HST) Network is available (Mens en Ruimte 1993). The SEIA for HST Networks does not relate to the research question that focuses on freight transport, however, it provides for a first methodological reference (Interview 12). The SEIA for HST has some interesting characteristics:

- It has a medium-term orientation towards 2010, which requires a scenario-method, including a reference case where traffic flows continue to grow without major policy interventions. It also includes a High-Speed Train (HST) Scenario and Forced Mobility Scenario, where mobility increases using only conventional traffic modes.
- It contains a multidimensional impact analysis, including local and global problems, such as: CO₂, air, security, noise, and land-use.
- It includes feed-back mechanisms of improved transport systems especially of higher speed - such as induced transport flows. The study assumes that about a quarter of the growth of HST (or 26 billion Passenger KM) which results from "induced" mobility, whereas the other 75% derives from modal-split effects from more polluting modes (e.g., air and road).

The scenario comes to the optimistic results, that the HST Networks can make a "positive contribution to both the natural and the human environment." In contrast to this optimistic result, the study concludes that CO₂ emissions will increase by 26% in 2010 in the High Speed Scenario. The "positive contribution" only exists

compared to bleaker results found in other scenarios (30% in a business-as-usual scenario, or even 36% in the forced mobility scenario).

The SEIA for HST, however, highlighted some problems (personal communication):

- The full report has been kept confidential - yet it has been discussed intensively by the concerned parties (personal communication).
- Data availability was difficult, since they had to be harmonized for 14 countries.
- There was a large degree of uncertainty. A number of assumptions were made which might be biased (i.e., assumed average occupation rates).

Despite of such shortcomings, this study proved that SEIA would be technically feasible on a European scale.

A major initiative for the strategic assessment of the Trans-European Networks at the system level started with the Cost 328 Programme. A general analytical framework for this network was presented in March 1995 in Lausanne (Frybourg/Nijkamp 1995). It will take two years until the results of this work programme are completed. The framework establishes a multidimensional set of criteria to achieve an "efficiently operating network". "Interoperability", "interconnectivity," and "intermodality" are three key objectives of such a network. Infrastructures, compatible information technology, organization, environmental constraints, and finance are the critical factors and constraints to achieve those three objectives. The environment is integrated as one factor in this wider framework, yet a specific assessment methodology has not been developed. The objective of the whole initiative is a multi-dimensional "optimization" strategy, whereas the environment is a constraint in a growth-oriented framework, which enlarges and improves the capacities and the performance of the European transport sector.

Corridor analyses are reported for France (OECD 1994q); the Netherlands (Janse u.a. 1995), Germany (Hochstrate 1992), and Austria (Knoflacher u.a. 1991). Many of them suggest, that railways are better off and transport growth rates lower, if double infrastructure extension is avoided and only the railway corridor improved.

2.4.2 Impacts on Land-use and Pollution

The methodological requirements are rather different for the direct impact of infrastructures on habitats and other land-use questions than for the indirect impacts on energy use and pollution by the use of infrastructures. The methodology of the impact on land-use is the most advanced and less controversial type of

assessment (i.e., Bina u.a. 1995; Wagner 1994; Günnewig 1992 on the “Ecological Risk Analysis” in Germany). Geographical Information Systems (GIS) exist and are further refined in a number of research projects to highlight potential land-use conflicts.

The impact analysis on energy use and pollution are more controversial because they imply transport flow modelling with different underlying theoretical concepts (Arlt 1993: 7). The definition and the relevance of “induced transport” due to new infrastructures are two of the most controversial points of the expert discussion. The Commission (DG XI) has financed a study to clarify this issue in 1994.

In Germany, the Environmental Protection Agency assumes an additional CO₂-increase due to “induced transport” by the new Federal Transport Infrastructure Plan (Gorißen 1992). Other studies assume a reduction of 2.5 to 7% and the German Cars Federation even by 40% (Baum 1994: 166). The idea of induced transport relies on the “law of constant transport time budget”. When the higher the average speeds get higher, then average distances may become longer (Meier 1989). However, since this law does not find unanimous support, it must be differentiated according to different user groups. Elasticities are rather high in the field of passenger transport, but it is relevant for freight transport, too (Baum 1992: 8f). The relevance of “induced transport” has found strong official support by a report from the British Standing Advisory Committee on Trunk Roads (1992) and the SEIA on Trans-European Networks (Mens en Ruimte 1993). On the other side, it is assumed that higher road infrastructure capacities improve traffic flows and reduce congestion and unnecessary transport (Baum 1994: 168). “Induced Transport” may be just the “bundling effect” of better links, which reduces traffic on others. It may shift problems to less sensitive places (on the different approaches as well: Meier 1989: 24f). Therefore, even “environmental improvements” by new highways may be measured.

The methodological controversy reflects the different positions of the “advocacy coalitions” involved. The “environmental expert networks” tend to use the argument to underline their preferences for setting modal priorities and discriminating highways against environmentally friendly infrastructures (i.e., Knoflacher u.a. 1991). Furthermore, they emphasize the contradictions of further transport growth to climate protection targets (Hesse 1993: 248f). The “growth-oriented networks” emphasize the risks of a selective approach to economic growth and productivity (Baum 1994: 170).

2.4.3 Data aggregation and Monetization

The discussion on aggregation and weighting creates similar problems as the discussion on “external effects”. The monetization of the external costs of new infrastructures raises the same methodological controversy (see there). Often rather questionable figures are used as a reference basis (see: Wagner 1994; and Gorißen 1992 on the German Highway Plan; or OECD 1994q: 40). An OECD report (1994q: 40) highlights the risk of “expertocratic” decisions, which were distorted by a number of biased assumptions. In addition, the EURET Study for DG VII is rather cautious if all environmental impacts of transport infrastructure investments may be monetarized (EURET 1994: 16). It recommends multicriteria analysis (EURET 1994: 48). Monetary impacts must be “selective” because some impacts may not be quantified. This would create the risk of a perception bias (EURET 1994: 49).

2.5 Conclusion

One can observe a rather homogenous expert network working on the principles of SEIA and a rather disperse, nationally and politically-fragmented network on their application to transport infrastructure investments.

After 15 years of reflection and SEIA practice, the EIA network is rather optimistic that considerable methodological advances could be made on SEIA. It is convinced that methodological experience is sufficiently advanced to become applied. Nevertheless, experts perceived a number of political problems. Therefore, they recommended a rather cautious and pragmatic approach.

The application on transport infrastructure policies has been met with more difficulties. Considerable research is in progress, however, consensual conclusions on how to measure the environmental impact of infrastructure plans could not be drawn yet. Expert networks are split along the different advocacy coalitions on transport and environment. Moreover, methodological choices for transport infrastructures are politically highly sensitive. The application of SEIA on the Trans-European Networks is in its early stages.

In the context of the “temporal sorting model,” one can argue that the solution has become ripe on the level of principles, but not yet on the sectoral level of transport infrastructures.

3 The problems

SEIA is a deductive concept derived from the idea that the environmental dimension should be taken at all decision-making levels into account. The limits of a project-oriented EIA were perceived from the beginning of the EIA discussion in the seventies (Lee 1979: 4f). Such theoretical reflections, however, were not sufficient to find adequate support for a SEIA.

About 10 years later, five significant events and issues have strengthened the case for SEIA: (1) the review process of the EIA-directive from 1995; (2) the emerging discussion on “sustainable development and global climate change;” (3) nature protection; (4) the environmental impact of the Structural Funds; and (5) recently, the impact of the Trans-European Networks. These problems have highlighted the need for a SEIA.

3.1 Reevaluation of the EIA-Directive

In the context of the review process of the EIA implementation, the deficits of EIA could be shown. The “reevaluation” process of project EIA was used to “reinitiate” the discussion on SEIA (Interview 21).

Major arguments of the first review of the implementation of the EIA directive (COM 93, 575 from 16.3.1994) were:

- Alternative options were not taken systematically into account. Therefore, EIA could not function as a tool for optimal solutions.
- The consultation among environmental authorities was weak. The vested interests of the actors promoting a project were dominant in the decision-making process.
- Often results of an EIA did not adequately take decisions into account. Project promoters were not required to justify their decisions.

- Definition of project types, where EIA would be necessary, was unclear. Some countries defined high thresholds while others were low.

The official review (done by the EIA Center in Manchester) did not explicitly argue in favour of a broader approach. It was decided to separate the direct reevaluation process from the initiation process (Interview 21). This could be done easily since the same authors (Lee/Walsh 1992) had prepared a study on the state of SEIA practice in member states just before they had finished the official review. Hence, review and initialization were formally separated, whereas they were substantially linked (this corresponded to the strategic decisions of the Commission on this issue - see below).

The main argument in the discussion was that the scope of a project-oriented environmental impact assessment is too limited (Lee/Walsh 1992; Glasson u.a. 1994; OECD 1994q).

A project-oriented EIA cannot analyse the cumulative impact of several projects in a certain area. It has a bias on the local impacts, and neglects the global ones. It focuses on the short-term and direct consequences, and ignores the long-term and indirect ones.

Project-related EIA is late-coming in the hierarchy of decisions. The options still available at the project level are few. Therefore, an environmental impact assessment for policies, plans, and programmes would widen the scope of alternatives that could be taken into account.

3.2 Sustainable Development

Since 1987 the concept of “sustainable development” became a broadly accepted concept at various international conferences. The Brundtland Report (1987), as well as later conferences like the Bergen Conference (1990), emphasized the need to integrate environmental policies into other sectors (ECE 1992: 1; Bodansky 1994). Those international conferences contributed to bring global environmental threats, especially global climate change, on the policy agenda. The SEIA network argued that it would be better to monitor such environmental impacts than project-oriented EIA (Wood 1992; Lee/Walsh 1992: 131). SEIA was described as a tool for “sustainable development”.

3.3 Structural Funds and Nature Protection

Regional Fund interventions during the eighties were often the cause of complaints on disrespect for the environment or environmental law. The most frequent cases where an insufficient environmental impact assessment was the violation of the Birds Directive.

The neglect of the environmental dimension in the framework of the Structural Funds received criticism from different sources (Baldock 1990; RSPB 1990). The European Court of Accounts (Europäischer Rechnungshof 1992) especially criticized the lack of participation of environmental authorities in the Structural Funds, and the resulting lack of compatibility with existing environmental legislation.

Already in 1987, the Commission Services prepared "internal instructions for EIA of Community, Plans, Programmes and Projects". But it was difficult to find an agreement among the different services on a clear definition. In 1991 a "Vademecum" for the Structural Funds regions was prepared by the EIA Center in Manchester, which contained guidelines for all concerned on how to make an EIA for operational programmes and plans (Wood/Lee 1991:253). In this Vademecum, they recommended to promote the early participation of environmental authorities.

SEIA became an issue in the framework of the discussion on the "Habitat Directive" since 1988. The idea of the Habitat Directive was to create an European network of valuable habitats to protect endangered types of flora and fauna. The older Birds Directive from 1978 was not perceived to be sufficient, because it relied only on the habitats for one type of species. Major infrastructure schemes often had a severe direct and indirect impact on protected habitats. The project-oriented EIA was not perceived as a sufficient safeguard to protect natural habitats. Therefore, the evaluation of the impact of development plans and major programmes on natural habitats became an important issue (Bunge 1992: 9; Bader/May 1992: 74; Interview 20 and 21).

3.4 Trans-European Networks (TEN)

One of the latest problems, as discussed in the context of SEIA, was the Trans-European Networks (TEN). SEIA for transport infrastructures was discussed as early as in 1990 by the "Forward Studies Unit" (1990:32), which inquired into the crisis of the transport sector. Arguing that EIA would not be sufficient, the expert report recommended "comprehensive environmental cost-benefit analysis for transport policy initiatives". In its White Paper on the "Future of Common Transport Policies," the Commission promised an SEIA for the Trans-European Networks (1992: 115). This commitment was restated in later documents - in a rather weak formulation in the proposal for a TEN Regulation in 1994 (Kom (94) 106).

Environmental organizations were concerned on the environmental impact of the plans for Trans-European networks rather early. They were especially concerned with the ambitious motorway extension plans of 12,000 km. Environmental organizations argued that this programme would contradict with the climate protection targets of the EU. EEB members expressed their fears on the impact of the TEN at a workshop in October 1992 (EEB 1992b). In their resolution, they asked for an EIA for the TEN and for improved consultation. They asked for an "advisory committee" within DG VII to discuss the environmental impact of the motorway plans. The federation T&E invested its energies in its campaign on "Getting the Prices Right," but also raised considerable concern on the environmental impact of the TENS in its bulletin.¹

Campaigning for SEIA on the TEN really started end of 1994, when environmental organizations discovered the EP might support their case. Environmental groups felt that a SEIA might be the only possibility to be involved in the decision-making process on the TEN (see below).

In December 1994, the Environmental Council mentioned the need for a strategic impact assessment of the TENS in its resolution, which was formulated from an initiative by the German presidency (see Chapter 3 of the EU Report 1996).

¹ "EC trying to by-pass environmental assessments," T&E Bulletin, No. 23, Nov. 1993
"EC presses on despite environmental objections," T&E Bulletin, No. 27, April 1994

3.5 Conclusion

SEIA is a general procedure that may be applied in a number of policy fields, especially in the fields of spatial planning and large scale infrastructure planning. Transport is not the only (nor the first) case in which a SEIA could be applied.

At the European level, the application of SEIA was first discussed in the field of nature protection and with the Structural Funds. Protected habitats may not only be affected by single projects. Moreover, the insufficient application of the EIA directive in the case of the Structural Funds opened the need for a more far-reaching approach.

Furthermore, the experience with the implementation of the EIA highlighted its predictable limitations. EIA was only a partial problem-solving tool. Its limitations became obvious during the "evaluation" process. They felt it was necessary to find a solution with higher depth. This interpretation fits well into "stage models" of environmental policies (Prittwitz 1990). According to those models, complex solutions with more depth only successfully came on the agenda after the insufficiency of additive and simpler solutions may be proved.

In the context of the Commission's plans for Trans-European Networks, SEIAs became a new impetus and received more support among environmental groups, as well as the European Parliament. While initially it was a "technical issue" for small expert circles, EIA received a strong symbolic value in the context of the debate on the environmental impact of the Trans-European networks. In a coordinated effort, environmental groups successfully lobbied the European Parliament to ask for a SEIA of the TEN's. The Environmental Council and the Commission started cautious initiatives in favour of SEIA.

In the terminology of the temporal sorting model, one can argue that SEIA methodology was looking for a problem. Since 1987, the solution met an increasing number of problems. The discussion has become "political" in the context of the discussion on the environmental impact of the TEN. At this stage environmental organizations and the European Parliament has become actively involved - bringing this experts issue on the political agenda.

4 On the way to Making Decisions

SEIA was mentioned in the first proposal of the Commission for the EIA directive in 1980. However, negotiations on the EIA directive took over five years and partly another five years to transfer it to national law in most member states. The negotiation process proved to be so conflict intensive that any reference to SEIA was skipped rather early.

The second time SEIA was discussed in the context of the so-called Habitat Directive, which occurred between 1988 and 1992. The Habitat Directive is the first legal requirement which contains an embryonic element of environmental impact assessment for plans.

Also attempts to strengthen the environmental reporting system of the Structural Funds were successful. The directive from 1993 contains the first time an environmental statement on the regional plans. This can be interpreted as an SEIA in a embryonic state.

In 1989 the Commission started work on a SEIA proposal, which was discussed in expert circles in various countries. The issue proved to be sensitive because it affected different national planning traditions and the discretionary powers of governments. Some governments, especially the Netherlands, actively lobbied the Commission to export their issue to the European level. Other countries, especially Germany, formulated more critical positions.

Different networks on the EU, one led by DG XI and another led by DG VII, continue to work on methodological questions.

SEIA became an issue in 1995, when it became part of the power game between the European Parliament and the Council.

4.1 A long-term strategy from 1980

The early reports of the EIA Center in Manchester recommended a gradual approach to the Commission, starting with impact assessments for projects and then gradually applying EIA to programmes, plans, and policies. Project EIA was perceived to be easier and more acceptable to decision-makers than assessments at higher levels (Lee/Wood 1977: 8; Lee 1979:56). Instead, they recommended gradual capacity building for SEIA. LEE (1979: 44f) recommended research activities and pilot projects to promote SEIA.

Even in the preparatory phase, the proposal for the EIA directive proved to be a difficult and controversial process. Between 1977 and 1980, twenty-three draft proposals were discussed in the Commission (Interview 20). The decision to postpone initiatives for an EIA for policies, plans, and programmes was made by the responsible Commissioner rather early - especially because he anticipated the resistance from member states and preferred a success-oriented proposal.

The long-term objective to develop from a project to a policy-related EIA was explicitly mentioned in the first draft proposal for the EIA directive in 1980 (Kom (80) 313: 8). In its explanatory introduction, the Commission emphasized the need for a preventive approach in environmental policies. The Commission argued that avoiding damage altogether would be less expensive than to repair it in the future. Furthermore, early participation and intervention would reduce conflicts on certain projects. In principle, it should be applied on all levels before a decision is made. Nevertheless, to avoid the overload of the administration, a gradual approach was proposed. The project EIA was not seen as an alternative to SEIA, but only as a first step.

Those reflections did not find their way through the controversial decision-making process. They were dropped in the directive that was finally adopted in 1985. Nevertheless, the Commission stuck to its own long-term agenda from 1980, and continued to start initiatives on this issue after the EIA directive was adopted.

The Forerunners: Habitat Directive and Structural Funds Regulation

After four years of negotiations, the Habitat Directive on the protection of flora, fauna, and habitats was decided in 1992 (Dir. 92/43). The aim of this directive was to develop a system of nature protection areas in Europe, which should protect the habitats of plants and animals. The species to be protected the habitats, as well as selection criteria, were defined in six annexes.

The Habitat Directive contains Article 6.3, which formulates strong safeguards for habitats: “Any Plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect there on either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site, in view of the site’s conservation objectives” (English version in: Bina u.a. 1995: 17).

This part is widely interpreted as a strict environmental impact assessment for plans. It implies indirect and cumulative impacts and even reaches beyond “assessment.” It defines the criteria (conservation objectives) which should not be violated by the plans (Ssymank 1994: 397; Bader/ May 1992: 71). Furthermore, it defines the conditions under which the conservation objectives may be violated or not. Article 6.2 states that the conditions in habitats should not be worsened by human impacts. The directive distinguished between protected habitats and prioritarian habitats or protected species. Protected habitats may be damaged if overriding reasons of public interest prevail and/or if no alternatives are available. If a project is unavoidable under such conditions, compensatory measures are required. Prioritarian sites may only be violated after the Commission has made an approval, and reasons like public health and security are considered to get priority. The interpretation of this article is presently disputed between environmental organizations and the Commission in a precedent on a German highway project. According to some NGO’s, the final outcome of the case will show how strong the safeguards of the directive actually are. The Commission tended to give unproven socio-economic arguments (on the positive employment and regional development impact of the highway and the lack of alternatives) priority over the environmental cause.² Environmental organizations argue that alternatives would be available and the socio-economic need would not be given.³

The Habitat Directive required a controversial, technically-complicated and conflict intensive process (Bader/May 1992; 72f; Hey/Brendle 1994: 609f). The criteria, definition, and extension of habitats, financial questions, and the distribution of competences were the issues most controversially discussed in the Council. According to interview partners (Interview 20 and 29), the above cited Article 6 was not one of the most controversial issues. The Habitat Directive was discussed in a “nature protection network”, so that the potential safeguard against socio-economic interests included in this article was not perceived to be sensitive. According to other sources (Bader/May 1992: 75; Hey/Brendle 1994: 610), the impact as-

² Stellungnahme der Kommission vom 27.4. 1995 zu der Querung des gemeinsamen Tales von Trebel und Recknitz durch die geplante Autobahn A 20 (OJ C 178/§ from 13.7. 1995)

³ Statement of Claus Mayr, NABU, on a Conference on TEN and the Environment, 28.6. 1995; Statement of the NABU : Highway project A 20, May 24th 1995

assessment was a controversial issue. The European Parliament (which at this time only had a consultative function) asked for stronger environmental impact assessment for plans and sought to make any community contribution to a plan dependent on the respect of the habitats network (Bader/May 1992: 75). This found neither support by the Commission, nor by the Council. The Commission wanted to avoid the word "EIA" to avoid a new line of conflict and to keep the political profile of this issue rather low. Furthermore, the term EIA would create wrong associations. EIA, in the sense of the directive, is different to the assessment, as required in the Habitat Directive. The first is rather procedural, while the requirement in the Habitat Directive is rather substantial. In this sense, the requirement in the Habitat Directive is stronger than the requirements of the EIA directive - as to the procedural elements, it would be weaker (Interview 21).

The safeguards of the Habitat Directive can be interpreted as a "policy accident". They were adopted because the attention of potentially opposing economic interest groups was not directed to this special aspect of the directive. The safeguards could be hidden in the noise of a number of conflicts, which were perceived to be more substantial by the participants. In effect, the Commission chose a low profile of this issue, instead of a terminology with strong symbolic associations (EIA).

In July 1993 the Council decided to revise the Structural Funds (Reg. 2081/93). A new set of regulations was passed only three months after the Commission's proposal in April 1993.

In the context of this chapter, Article 8 of this regulation is of special interest because it defines the conditions for regional development plans that are sent to the Commission for financing. Article 8.4 qualifies the environmental dimension. Regional development plans must contain:

- a state of the environment report of the region;
- an environmental impact assessment of the plan, which takes the principles of sustainable development and EU environmental law into account;
- a report on the role of environmental authorities and how they are incorporated.

This requirement can be characterized as an embryonic environmental impact assessment for plans. Neither the procedural requirements nor the substantial ones are really qualified in the regulation. However, DG XI (in Cooperation with DG XVI and DG VI) have prepared some guidelines (cited in: Lega Italiana Protezione Uccelli u.a. 1995). Evidence suggests that this Article and the guidelines are not taken seriously by the concerned member countries (ibid.; Interview 14 and

28). Article 8.4 is generally interpreted as a tool to strengthen the implementation of existing legislation - but not as an additional requirement.

This may explain the low level of resistance from the side of the Structural Funds countries on this issue. On the other side, Art. 8.4 could partially satisfy the highly profiled demands of environmental organizations and the European Parliament.

The environmental impact of the Structural Funds was a core activity of WWF and RSPB since 1986 (Hey/Brendle 1994: 467f). Both financed a number of studies on the environmental impact of the Structural Funds (i.e., Baldock 1990; ADE-NA/WWF 1991; Meldon u.a. 1992 and 1993), initiated campaigns for the protection of special habitats (i.e., RSPB 1990), and organized a number of seminars. Furthermore, these organizations successfully lobbied the European Parliament, who supported many of their demands in principle. In February 1992 seventy environmental organizations signed a position paper on the Structural Funds, where they formulated five principles. Sustainable development should become a core principle for financial support and a new objective. They asked for an environmental impact assessment of the programmes and for obligatory participation of the environmental authorities and non-obligatory participation of environmental organizations. Furthermore, they asked for the application of the "freedom of information" directive to the Structural Funds, and for sanctions and withdrawal if violations against environmental legislation became known.

In 1992 the European Court of Accounts strongly criticized the weak state of incorporation in the Structural Funds (Europäischer Rechnungshof 1992). They highlighted two structural deficits in their report: insufficient participation of the environmental authorities and their weak capacities. Therefore, the incorporation of the environmental dimension into the plans was considered weak. The report was often used as an official point of reference in the campaigns of the environmental organizations (i.e., Hutter u.a 1993). In response, the Commission accepted deficits in terms of internal coordination between different Directorate Generals (DG's). Furthermore, it promised to strengthen the organizational capacities for the incorporation of the environmental dimension.

The European Parliament, which was involved as a strong player in the framework of the cooperation procedure, and had supported the requests from the environmental organizations (Europe Environment, No. 414 from 20.7. 1993; Europe 25.6. 1993:11; Europe 24.6. 1993: 11). A tripartite conciliation meeting between the EP, the Commission, and the Council in July 1993 cleared the way to the quick adoption of the regulation a week later. The compromise included the environmental appraisal for the plans, but it did not contain the more far-reaching demands for participation and sanctions.

Similar to the Habitat Directive, the appraisal for plans was not the major issue of the regulation. The reform of the Structural Funds, and especially the doubling of financial contributions towards 1999 were part of the package deals that were necessary to find support for the Maastricht Treaty and the European Monetary Union. The environmental appraisal of the plans, which was supported by the Commission, the European Parliament, and actively lobbying environmental organizations, could be accepted by the Structural Funds countries, as long as they were not enforced by sanctions and NGO-control, and as long they were formulated in a rather vague way. They accepted a “symbolic instrument” to appease one of the most profiled criticisms on the Structural Funds.

4.2 National Preferences and Positions on SEIA

At present (August 1995), SEIA has not been a topic for the negotiations within the Environmental Council. It was discussed within an intergovernmental SEIA expert group. The discussions within this expert group are strictly confidential. None of the six interview partners on this issue could give detailed information on this issue. Since the discussions took place at the lower level of services, other sources of information are rather “patchwork” and “incomplete”.

An analysis, therefore, may rely on different sources:

- the “indicator analysis” of Chapter 3 of the EU study 1996 provides some informations;
- one can assume that the lines of conflict on SEIA correspond to lines of conflict in the EIA- process;
- other sources may complete the picture.

The following analysis tries to define a “synthesis”.

The pioneer and “leader” for SEIA in the EC is the Netherlands. As shown in Chapter 3 of the EU study (1996), environmental policies in the Netherlands may be characterized by both “anticipatory” and “participatory” approaches. SEIA fits well into the open, streamlined, and consensus-oriented Dutch planning system (see: Ministry of Housing, Spatial Planning and Environment 1995: 3). The Netherlands have played a constructive role in the EIA legislation process, and was one of the first countries to implement the directive (Coenen/Jörissen 1989: 19 and 198; Scholten 1995: 11). The Netherlands was the only country that anticipated the gradual approach, which was chosen by the Commission in 1980. They also

introduced EIA requirements for certain plans in their legislation from the beginning (Coenen/Jörissen 1989: 10 and 217; Verheem 1991). They advanced their more far-reaching legislation at a time when the decision-making process on the EIA directive became too cumbersome and difficult. The wider EIA legislation, however, was restricted to certain plans and not to policies.

EIA practice in the Netherlands contains other elements, which have SEIA model characteristics as well. EIA requires the analysis of alternative options, including an option that minimizes environmental damage (see: Coenen/ Jörissen 1989: 217; EG-Kommission, Kom(93) 28, vol. 13: 209). Consultation and participation are well-established in the Dutch EIA practice (ibid.). Furthermore, the Dutch Government has established an independent EIA Commission, which reviews and controls EIA practice and contributes to a gradual improvement of EIA's (Commission for Environmental Impact Assessment 1994). Those high quality standards, however, are only applied to a limited number of projects, since thresholds for obligatory EIA are set at a relatively high level (EG-Kom (93) 28, vol. 3: 20f). Since 1987 the Dutch government discussed the further extension of EIA to policies. In 1993 an environmental chapter for sectoral policies has become obligatory and an expert group was asked by the government to analyse the possibilities of an "environmental test" for policies (Ministry of Housing/ Spatial Planning and Environment 1995: 4). The report of the Advisory Committee on the Environmental Test (1993), recommended a "pragmatic", "effective", "flexible", "professional" and "feasible" approach, which should be compatible with the EU context (ibid.). The objective of the "environmental test" is to "internalize" the environmental dimension into the competent ministry and not to promote external control. The requirements for the environmental statement are kept relatively open, and correspond to a checklist (Ministry of Housing 1995: 6).

The Dutch government actively supported the initiatives of the Commission towards SEIA legislation. An expert from the Dutch EIA Commission prepared a proposal in Brussels in 1992/93 (Interview 33). Furthermore, the Environmental Ministry organized a number of international workshops and seminars in order to promote discussion on this issue (Ministry of Housing 1995). There was active leadership on this issue, which corresponded to the concept of "regulatory competition" (Héritier u.a. 1994). (See Chapter 3 of the EU Report 1996).

The analysis of indicators found that the characteristics of Denmark are quite similar, to the Netherlands. However, on EIA Denmark was less active. For a long time, Denmark was one of the opponents to the EIA directive because this would require high adjustment costs of the existing sectoral EIA procedures (Coenen/ Jörissen 1989: 74; Héritier u.a. 1994: 307). The directive was transposed late in 1991, and required a number of amendments to be fully compatible with the EC

directive (Elling 1995; as well: Coenen/Jörissen 1989: 19). The Danish position, however, changed with the new government in 1993. In February 1993 the government issued an administrative order, which made an Environmental Impact Assessment for new policy proposals obligatory. The evaluation shall take place on the basis of a checklist of indicators. The gradual sophistication of the evaluation system is planned (Denmark Ministry of Housing 1995). The requirement has been applied in the transport and energy sectors, but not for regional plans yet (Elling 1995: 6).

The Danish Environmental Ministry strongly supported SEIA in its discussion paper for the informal Environmental Council in 1993 (see: Chapter 3 of EU Report 1996).

France was one of the first European countries to introduce legislation for environmental impact assessment in 1976 (Héritier u.a. 1994). This was explained by the strong civil rights culture at the lower political levels (ibid.). During the EIA negotiations, it was sympathetic to the EIA proposal, but it did not play a very active role (Héritier u.a. 1994: 307). EIA implementation was minimalistic and raised considerable doubts among EIA experts on its effectiveness (Falque 1993). France started to develop approaches towards SEIA in 1990 (Turlin u.a. 1991; Darrieutort 1991; Falque 1993; Falque 1995). In 1993 a French government decree required an environmental statement for programmes. A number of SEIA projects were made in the energy and the transport sector (Falque 1995: 8; OECD 1994q). In 1995 the recently elected President Chirac had promised to introduce SEIA and to strengthen participation during his electoral campaign (Falque 1995).

The Netherlands, France, and Denmark appear to be the current leaders in European SEIA legislation. However, empirical evidence on this is still weak.

The United Kingdom may play a rather ambivalent role with European SEIA. Taking into account the experiences, government initiatives, and regulations for environmental impact assessments on plans, the U.K. might take over a leadership role. However, due to its Euro-scepticism and subsidiarity rhetoric, the U.K. is presently one of the opponents to a European approach on SEIA (Wilkinson 1994: 13; Therivel 1993: 158). As the indicator analysis emphasized, the discretionary and informal characteristics of government in the U.K. is the major reason why the government is reluctant to accept formalized procedures that include strong elements of participation - even if its voluntary practice may be rather advanced. For a long time, the U.K. opposed the EIA directive, but due to internal pressures it softened its position. The transfer of the EIA directive into national legislation was minimal (Coenen/Jörissen 1989: 19), and created a number of conflicts with the Commission on the interpretation of the directive (Sheate 1994; Kom(93) 28, vol. 12: 78).

Nevertheless, the U.K. government had an advanced level of EIA practice, before EC legislation was introduced (Coenen/Jörissen 1989: 136). This also applies to SEIA practice. In 1991 the Environmental Department published a series of handbooks entitled, "Policy appraisal and the Environment," which provided advice and methodological instructions. The handbook emphasized the use of cost-benefit analysis for the assessment of environmental impacts (Therivel 1994: 2). As SHEATE (1994: 146f) argues, the word "appraisal" was used as an alternative to the word "assessment". "Appraisal" is just the identification of impacts, while "assessment" infers evaluation in the background of a target-led environmental policy. In 1992 the U.K. government issued a Policy Planning Guide (Nr. 12), requiring counties to make an assessment of their regional plans (Cuff/Ruddy 1994: 47). Since then, considerable experience has been made in a number of regions (a review given by: Therivel 1994). In the context of road infrastructure projects, the U.K. government, however, formulated a weak commitment for SEIA in its reply to the SACTRA Report entitled, "Assessing the Environmental Impact of Road Schemes" in 1992⁴ (DOT 1992). In the report, the authors recommended "the appropriate environmental assessments must underly every stage in the hierarchy of decisions". It asked for the consideration of short, medium, and long-term impacts. In its reply, the DoT argued that it would stick to this principle by means of White Books and other reports. Besides, it emphasized the positive environmental impact of road schemes, such as reduced CO₂ by less congestion or less local nuisance with the use of bypasses.

One of the strongest opponents to SEIA has been Germany. The indicator analysis emphasized a technocratic and non-participatory environmental policy approach in Germany. Germany's environmental policies strongly define high technical standards, but weakly define participatory procedures. Participation is perceived as a risk to infrastructure investments and to German competitiveness. After reunification, a number of laws were passed to speed up public infrastructure investments at the expense of participation and evaluation requirements (Ludewig 1993: 35). Germany was opposed to EIA legislation because it did not fit into its national regulatory system. The German system is characterized by different systems for different environmental media and for different economic sectors. Public participation is limited, but control by courts is rather strong (Kom (93) 28; vol. 3: 30). The EIA directive is a horizontal procedure, applying for all sectors and all environmental media. Public participation plays a strong role. Because of those different approaches, the implementation of the EIA directive created considerable problems.

⁴ SACTRA = Standing Advisory Committee on Road Assessment

EIA was transposed late. Only in 1995 the internal administrative order on how to implement the German EIA law had been completed (Wagner 1995: 8). Regarding SEIA, the German government formulated a number of reservations against the internal proposals of the Commission. It argued against an assessment for policies because this would affect the discretionary power of the government. It feared legal action against government decisions. Furthermore it raised a number of methodological reservations, since policies and plans are general and indicative to make an assessment. Since modifications at lower levels may take place, the workload would be doubled.⁵ Criticism was also formulated by some Länder (German states) (Wagner 1991: 98). Although an official statement on the 1995 draft proposal has not been prepared (expected in August 1995), the reservations continue to be quite strong (Interview 31). The proposal is perceived to be imprecise and lacks clear environmental criteria. Questions on the environmental added-value of the purely procedural approach of the directive have been raised. Such deficits may result in a "symbolic instrument", which pretend to protect the environment by an SEIA. More-over, taking into account the German legal system, the directive would create much more work for the courts. Therefore, a more substantial approach that defines clear standards and criteria would be preferred. Instead of a general cross-sectoral system, SEIA should focus on a limited number of policies, where precise terms of reference may be formulated. Nevertheless, constructive proposals will be formulated to avoid "fundamentalist opposition" against an EIA for plans.

In a conference statement from 1994, the German Environmental Protection Agency, formulated a more positive position on SEIA, even though it still views considerable methodological problems.⁶ The Ministry of Transport and the Environmental Ministry supported the demands for a SEIA on the Trans-European Networks, given by the Commission.⁷ Both the Ministry of Transport and the Ministry of Spatial Planning are working on a system analysis to model the environmental and spatial impacts of the national infrastructure plans. Thus, sectoral work on a voluntary basis is being done, whereas reservations on legislative activities are very strong.

The political profile of other member states is more diffuse. Most European countries have some experience in SEIA (Hughes/Lee 1995). Some are preparing

⁵ Mitteilung der Bundesrepublik Deutschland zum Entwurf eines Vorschlages für eine Richtlinie des Rates der EG über die Umweltverträglichkeitsprüfung bei Politiken, Plänen und Programmen; 1991

⁶ Umweltbundesamt; Paper for the International Workshop on SEIA, 12. - 16. 12. , Den Haag

⁷ So: Dorries on a NGO-Conference in Bonn, 28.6. 1995; Letter from the BMV from 19.7.1995; German initiative in December 1994 for the Environmental Council.

legislation on a regional level (like Belgium) or national level (like Spain, Austria, and Sweden) (a recent review: EIA Newsletter 10/1995).

In total, one can assume that over the past five years, support for SEIA legislation at the European level has become stronger while opposition has weakened, as more countries continue to discuss or introduce SEIA legislation. It is difficult to determine whether or not support throughout the member states has achieved a critical mass. In any case, one can observe interested and active political leadership on this issue in the Netherlands and opposition to SEIA in Germany and in the U.K.

4.3 Institutional Characteristics of the Decision-Making Process

European SEIA legislation and policies take place in a institutional and political environment, which is currently in a multiple transitional phase:

- a) the role of the European Parliament in environmental policies has been strengthened since 1993;
- b) it has veto power for the formulation of the principles on the Trans-European Networks;
- c) the number of actors was increased by the three new members after EU enlargement in 1995.

Ad a): The Maastricht Treaty came into force in November 1993. Before this date, the European Parliament had only a "consultation" right. The Council was required to vote unanimously on the need for action on the European level and with qualified majority on the contents. The veto power of a member state still was strong. After November 1993, the EP can codecide according to the cooperation procedure, which gives some opportunities to influence policies. The cause finds a wide support within the EP and the Commission (on details: see Chapter 3 of the EU Report 1996). Council decisions only require qualified majority. As shown below, this may improve the chances for SEIA.

Ad b): Before Maastricht the EU did not have an explicit competence for the development of the Trans-European Networks. After Maastricht it did. The EP can play a strong and active role in the formulation of the principles: They will be decided in the framework of the codecision procedure. This right has been used by the EP in 1995 to challenge the common position of the Council among others on SEIA for the TEN. The Council may decide according to qualified majority.

Ad c): Since 1995, three new members (Austria, Finland, and Sweden) have joined the EU. All three are rather favourable to SEIA (EIA Newsletter 10/1995).

In total, institutional changes since 1993 have broadened the opportunities for the introduction of SEIA legislation in the EU, and for its application to the Trans-European Networks.

The draft proposals 1989-1995

SEIA was not completely skipped from the internal agenda of the Commission. When the EIA directive was adopted in 1985, the Commission mentioned their intention to widen the scope of the assessment in the future. The review process in 1988 and 1990 should provide new opportunities to start new initiatives (Interview 21). In the framework of the Fourth Environmental Action Programme from 1987, the Commission restated its commitment to extend EIA “as rapidly as possible, to cover policies and policy statements, plans and their implementation, procedures programmes ... as well as individual projects” (Cited after: Wood/Lee 1991: 241).

Actual work on a SEIA proposal started in 1989. Since then, at least four internal draft proposals were reported from different sources (Sheate 1994b: 144; Cuff u.a. 1994: 47; Therivel 1993: 159): one from June 1991, the other from Nov. 1992, a third from 1993 and the fourth from May 1995. These draft proposals were discussed by the lower Commission levels and by the inter-governmental EIA expert group. Information on this process are highly confidential, and therefore, unreliable. It is evident that earlier proposals were opposed by German, British, and French EIA representatives. Nevertheless, it is reported that one of the earlier proposals was discussed at higher levels of the Commission, but it was finally rejected by the president of the Commission. In 1992 a Dutch EIA expert was hired to write a new proposal. Again, it was postponed when the Commission chose a low profile policy and a very cautious approach during the “Maastricht Crisis” from 1992 to 1993.

In 1993/1994, another initiative was discussed in the framework of the revision process of the EIA directive. DG XI decided to separate the revision process of project EIA from initializing SEIA. This decision was made to separate the less controversial improvements of EIA from the more controversial issue. The “unpackaging strategy” met some criticism from SEIA experts (Sheate 1994a) and the rapporteur of the European Parliament (Lannoye 1995). In June 1995, a new internal draft was sent to a selected number of interest group organizations to ask for comments. This can be seen as an indicator that the Commission seriously has started a new initiative for a proposal.

Only two of the four draft proposals were available to the author. A comparative content analysis of the drafts confirm the observation of what some authors call a continuous process of “watering down” of the requirements (Cuff u.a. 1994: 47; Sheate 1994b: 145) or what the author refers to as “success-oriented anticipation”. The proposal from 1995 is less ambitious, more flexible, less prescriptive and detailed, more streamlined and less complicated than the proposal from June 1991. This will be shown discussing the application of the principles of SEIA, as mentioned above:

Process character: The 1991 draft emphasizes the need that the EIA system “embraces the whole planning process ... at the appropriate stage of that process.” The 1995 draft is less explicit, and only defines the timing of SEIA (before the adoption of a planning strategy). Both emphasize the early application of the SEIA process.

Scope: The 1991 draft applied to policies, plans, and programmes. The 1995 draft only discussed plans and programmes. Policies were skipped from the 1995 draft. Both drafts defined exemptions from the application - which, however, are more far-reaching in the 1995. Cabinet decisions and equivalent measures are exempted in both drafts (Art. 4), but the 1995 provides for considerable leeway: Member states are exempt “if they consider that the provisions cannot reasonably be applied to the planning strategies concerned” (Art. 4). The sectors to be covered are identical in both drafts.

Quality of Assessment: The earlier draft defines strict quality criteria for the assessments: Cumulative, synergistic, and indirect, as well as short to long-term impacts of the plan and alternatives must be analyzed. The 1995 proposal only defines the environmental problems to be covered. An environmental minimization alternative is not required in either proposal.

Participation: Both drafts contain requirements for the participation by the environmental authorities and by the public. This procedural element is better elaborated in the 1995 draft, by requiring the opportunity for the public to make statements before decisions are made.

The 1995 proposal makes a number of concessions to the positions of the governments and to the expert analysis described above. Government discretion is maintained since Cabinet decisions and policies are exempted and a wide discretionary scope allowed governments to decide where they consider a SEIA to be applicable. Reservations on the methodological feasibility of SEIA are accommodated by the minimum formulation of substantial quality requirements. The 1995 proposal has a very open and flexible framework, which respects the great sectoral variation that has been discovered in experts’ reports (Hughes/Lee 1995 ; EG-

Kommission 1994m). In this sense, the expectations of the directive have been reduced to accommodate for and to anticipate counter-arguments from some member states. The proposal has become an open and nearly voluntary framework, which allows much sectoral and national differentiation and even non-action. Such concessions, combined with the national policy changes described above, may improve the chances for a successful SEIA proposal.

The quality of a SEIA will depend on the policy dynamics in certain sectors. The application to the Trans-European Networks - which is of special interest in the framework of this study - will be discussed below.

4.4 The EP, TENs and the Environment

Strategic Environmental Impact Assessment (SEIA) became a prominent political issue as part of a wider institutional conflict between the European Parliament and the Council in 1995. These entities disagreed on the Commission proposal on the Trans-European Networks from 1994. As cited in Chapter 1 of the EU Report 1996, the rapporteur in the Transport Committee, German Social Democrat W. E. Piecyk, formulated a critical report on the Commission's proposal (European Parliament, Committee on Transport and Tourism 1995). The report was critical of the fact that priorities for environmental modes were not made. Furthermore, actual project selection would not fulfill the "sense and purpose of the guidelines" (p. 29). The legal basis and enforcement for the guidelines was perceived to be rather weak, according to Piecyk's report. The selection of priority projects in the Christophersen Group was perceived not to be totally in line with the guidelines and took place without the participation of the European Parliament. Finally, environmental protection requirements were perceived to be weak. The report was supported by the European Parliament and on the basis of this, the EP formulated over 300 amendments to the Commission's proposal from 1994 in its plenary session of May 1995.⁸

Concerning the environment, the Parliament asked for the development of analytical tools for including the strategic impact assessment of the whole network and multimodal corridor analyses, in addition to an evaluation of the most environmentally-friendly alternative (Amendment 12). Furthermore, the EP asked for an "environmental risk assessment", the strict application of the Habitat Directi-

⁸ Europäisches Parlament, Protokoll der Sitzung vom 18.5. 1995; PE 190.442

ve, and a EIA. Finally, the EP defined a maximum share of 25% of investments, which could be appropriated to roads in the framework of the prioritarian projects of the Christophersen Group. Despite those environmentally-friendly positions, the EP approved a number of additional roads, some of which were highly contested by environmental groups.

This has raised doubts on the environmental credibility of the EP. The EP opted for an additive policy approach - compiling even contradictory proposals to find a majority. This suggests that the institutional challenge of the Council was the primary concern of the EP. The EP wants to apply its rights to participate in TEN development. The environment is only a strong vehicle to prove the neglected aspects of the TEN. The EP is basically challenging the discretionary, bottom-up characteristics of European infrastructure planning and is trying to promote a more rational, European approach with strengthened European competencies and rights.

Before the plenary session in May, the EP was actively lobbied by environmental organizations, the Transport Commissioner, and some national governments. Environmental organizations formed a new coalition, TENGO, in March 1995 and campaigned for stronger environmental safeguards. One of the focal points of their campaign was a SEIA for the TEN's prior to any financial commitment.⁹ Greenpeace published a study arguing that the TEN would contribute to an additional CO₂-growth by 15-18% beyond the predicted growth of the transport sector.¹⁰ Greenpeace campaigners have met several times with the rapporteur to discuss their demands.

The new Commissioner Mr. Kinnock gave a speech to the Socialist members of the Transport Committee recently in April 1995.¹¹ He argued that "to say that TENs are intrinsically hostile to the environment is wrong in principle and in substance". He argued that in the framework of the Christophersen projects, priority was given the environmentally-friendly modes. Furthermore, he considered EIA to be an effective safeguard. He added that road investments in peripheral countries would be necessary. But he promised to do an SEIA - after preparatory work on methodology was finished.¹²

⁹ Concrete Action, No. 5, April/May 1995; "At last a strategic EIA, but will it do much good?" T&E bulletin, 36, March 1995; "Unverantwortlicher Anstieg der Treibhausgase und gewaltige Fehlinvestitionen durch die Transeuropäischen Netze? Greenpeace Pressecommuniqué, 16.5.1995

¹⁰ Greenpeace 1995a: "Missing Greenlinks"

¹¹ "How Green are the TENs?" ECIS newsletter, May 1995

¹² The call for tender for this study was in August 1994. But actual work on this methodological study did not start before May 1995. In between it was said that it would not have priority (personal communication).

In addition to environmental groups and the Commissioner, some national governments also lobbied the European Parliament. For instance, the German Transport Ministry had contacts with the German rapporteur supporting the idea of a “ecological risk analysis” (which corresponds to the German motorway planning system), as well as supporting the development of SEIA tools.¹³

The perception of a wide consensus on SEIA is only superficial. NGO’s asked for SEIA because they perceived that this was the only way to get involved into the strategic decision-making process. The EP offered them a singular opportunity to get involved into a debate, which they were excluded from before. They already had started to build up grass-roots networks to fight the TEN at the local levels - which was the only other option they had at the time. For the Commission and some national governments, SEIA is a tool to justify the TENs and to strengthen the legitimation on environmental grounds. The SEIA that was made for the Trans-European High-Speed Trains (Mens en ruimte 1993) confirms this, as well as Kinnock’s speech before the European Parliament. His “trick” is to reduce TEN to the priority projects, which are rather rail-biased. Therefore, “methodological work” has become so sensitive that it has taken nearly half a year within the Commission Services to define the terms of references for a methodological study. Furthermore, methodological discussion would postpone any modifications for the TENs because of environmental reasons. Finally, SEIA is just one tool for a broader discussion to strengthen the European competencies in infrastructure planning by a more rational, criteria-led infrastructure planning approach.

The Transport Ministers Council ignored the challenge of the European Parliament in their reading in June 1995.¹⁴ Instead, it included and dropped a number of transport links in a framework of several package deals. The priority projects were withdrawn from the Commission proposal (amended in February 1995), and redefined as a purely intergovernmental matter. With this decision, the Council decided for an institutional conflict with the European Parliament, on the division of power in infrastructure planning. With its decision, it defended the national competence in infrastructure planning against selection criteria set from the European level. SEIA has become a political issue in this wider framework. Thus, the end of the story cannot be told yet.

¹³ Verbal statement by Mr. Dörris, BMV, during a NGO workshop in Bonn, 28.6.1995

¹⁴ “Ministers Champ at the Bit, as Hunt for More Money Goes On”, Transport Europe, June 1995

5 The Future of SEIA

Discussion on SEIA has a history of nearly two decades. One may question, as the above analysis suggests, whether a “policy window” is about to come or not.

SEIA practice and experience has improved at the level of legislation. Several countries have introduced SEIA related legislation. There is a strong consensus among scientific network that SEIA is both necessary and viable. The problem fields where SEIA could be applied have increased over the last years. Finally, the Commission has started a new attempt to initiate a policy proposal. However, opposition against a horizontal and procedural legislation, which risks to become a “symbolic instrument,” that means a “green label for sectoral policies and plans” still persists. The price for successful SEIA legislation will be a rather open procedural instrument, which provides for a wide scope of action and non-action in member states. SEIA legislation risks becoming a rather voluntary general framework legislation.

At the sectoral level, it is almost certain that a SEIA for the Trans-European Networks will come. Strong pressures from environmental groups, the European Parliament, and the commitment from the Commission have widened the audience and the attention to this issue. It is doubtful whether environmental organizations will achieve their objective, which is to use SEIA as a tool to gain access into the closed and intergovernmental process of TEN development. The SEIA practice on TENs and the speech from the Commissioner both suggest that SEIA will be used as a tool to justify the TENS on the basis of SEIA, rather than to modify them.

In conclusion, one can argue that the “policy window” for SEIA is opening, but only for other “embryonic forms,” which risk to be abused.

6 Conclusions and Lessons

The author has identified five lessons learned for the perceptions of incorporation from the analysis describing SEIA over the past 18 years. The more general conclusions on the two case studies (SEIA and Environmental Taxation) will be presented later in the chapter on “Testing the Structural Analysis” (EU Report 1996).

1. The process of incorporation may be chaotic and may have a long-term character - offering a number of occasions. The history of SEIA is not just a linear learning process from a simple to a complex solution. SEIA - as a cross-sectoral procedure - has been discussed on many occasions and in different arenas as part of wider policy packages. It emerged and disappeared from the decision-making agenda. SEIA principles often were hidden as subpolicies behind central issues of European integration (i.e., Structural Funds, Trans-European Networks).
2. Incorporation requires open doors to environmental NGO involvement and a strong European Parliament. Historical opportunities for “embryonic forms of SEIA” at the EU level always implied a high level of professional environmental NGO activity (i.e., Habitat Directive, Structural Funds Reform, SEIA of the Trans-European Networks) and a strong position of the European Parliament in the decision-making process. The European Parliament has worked as a supporter for incorporation.
3. The history of SEIA legislation and practice is, until now, a hidden process, highlighting the preconditions for a policy to come on the agenda. SEIA has been supported and promoted by a relatively stable expert network, who has perceived and used SEIA on different occasions. A convincing, but abstract and deductive concept is not sufficient enough to persuade decision-makers. SEIA came on the agenda at a time when new and wider problem definitions raised the attention of decision-makers during the discussion on “sustainable development.” Furthermore, practical experience and methodological feasibility had to be proved. A high level of research capacities has been found to be a precondition for the political success of SEIA.

4. A general cross-sectoral procedure has found strong experts consensus, but expert networks at the sectoral level are split according to their adherence to certain advocacy coalitions. SEIA shifts environmental, political, and social conflicts from the grass-roots level to the experts level. Such conflicts may endanger authoritative and consensual results. Furthermore, they require consensus-oriented, but pluralistic research strategies. Methodological disagreement may easily be used to justify the postponement of measures.
5. Incorporation must always be seen in the wider setting of the interests of the parties concerned. The Commission not only wants to improve environmental legislation, but it also wants to strengthen its own role (i.e., with infrastructure planning and transport policies). The same applies to the European Parliament, which uses the “environmental impact of the TEN” as a symbolic issue to defend its rights. On this basis, a (unholy) alliance could be observed between Commission, the Parliament, and environmental NGO’s on a SEIA for the TENs.

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