

**Transport infrastructure SEA in The Netherlands between procedure, process and content**  
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*Experience with the EU Strategic Environmental Assessment directive is emerging. In the Netherlands it has been applied to large transport since 2005. In 2006, an evaluation of the organization of this process was done. Key lesson: infrastructure developers undertaking an environmental assessment should keep an eye on procedure, interactive process as well as content, since these three variables should co-evolve in interaction. One of these variables may change and the others may have to be adjusted. If the developer is caught off guard the overall process may become inefficient, and the transport problem may not be adequately addressed. This is a matter of general management, not just management of the SEA.*

Keywords: SEA, infrastructure development, social cost benefit analysis

The Netherlands formally implemented the SEA Directive (2001/42/EC) in 2006. In the preceding years, several SEAs have been carried out in anticipation of formal implementation. This holds in particular for a number of large transport projects that were developed by the transport ministry. The Dutch system has required strategic decisions about infrastructures for decades, but for the first time a formal statement was dedicated exclusively to environmental impacts, and the developer conducted a separate interactive process to prepare that statement.

One such SEA was evaluated in 2006. Several infrastructure developers, holding responsibility for different strategic planning projects and SEA in the ministry, convened and discussed the wider applicability of the conclusions. It appeared that they had important lessons of general applicability in the Dutch context, and probably in the context of any highly developed democratic country. This paper is based on that evaluation. It provides a generic description of the context of infrastructure planning, its dynamics illustrated by actual cases and implications for management of the development process.

### **The context of infrastructure planning**

In probably any highly developed and democratic country, and certainly in The Netherlands, the development of transport infrastructure becomes increasingly controversial. Along with economic growth, flows of passengers and freight increase steadily. Sometimes lack of infrastructure is an economic bottleneck. Yet, there is always a competition for budget with other possible investments, and every possible expansion of the infrastructure network would also create adverse impact on the environment and local communities. All land already has an existing function, which is difficult to reconcile with transport.

In democracies, the government is responsible for developing a sound infrastructure network, and it must respond for its actions to the chosen representatives of the people, e.g. parliament. As citizens are concerned for adverse impacts, especially in their close neighborhood, their voice is heard in the democratic debate. The government has to organize an interactive process before it builds infrastructure, in order to convince parliament that this option is in the public interest. Often, parliament requires appropriate economic argumentation that an infrastructure will generate returns for the country, as well as that adverse impacts are adequately mitigated or compensated. The synonyms 'appropriate' and 'adequate' are intrinsically political, and made concrete in a process of learning-by-doing, where some custom or culture of planning and decision-making emerges, taking emerging knowledge into consideration. One important variable is the way in which private investors are involved in infrastructure development, since becoming financially dependent, the government may lose some of its influence on the development process, where it may still be fully accountable in democratic terms. Yet, thus far, this process is not regulated by

law, other than by the very division of the law-making and executing powers, parliament and government.

Parliament can dismiss a Cabinet, or it can refuse to approve its budget, if it does not agree with the way it develops infrastructure. To prevent such draconic consequences, procedures for planning and decision-making have emerged. If the government follows these procedures, appropriate infrastructure plans are supposed to develop. However, another problem is created. Each situation is different, and procedures have no clear criteria for 'appropriateness' based on measurable characteristics – also termed 'content' – of all infrastructures. Appropriateness of the content (the design, cost, direct and indirect impacts of infrastructure), still has to be determined in a process, and the second best option the law makers turn to, is to regulate that process. Detailed spatial planning procedures have already existed for decades in The Netherlands, and later EIA and SEA have been introduced detailing the environmental information. This is where formal assessments need to be undertaken. Again, more and more detailed procedures (often called 'guidance' or 'general practice') emerge to cope with different situations. Sometimes, like in the case of air pollution, generic standards can be used, but in most cases the debate is related to more subjectively evaluated impacts. Infrastructure planners become more and more skilled in applying procedures and use these to create democratic support. Yet, procedures and standards are complicated, in particular where air pollution and nature conservation are concerned, but also the requirement to 'hear' individual citizens that might be affected. Often opponents remain who can find an omission in the compiled assessments, perhaps based on earlier cases where such information has been compiled and which serve as jurisprudence. The practical behavior of judges differs considerably over Member States (Backes et al, 2006). In The Netherlands, this creates tremendous uncertainty among infrastructure developers, and their response is often to gather more knowledge than they think is useful for decision-making, with the sole aim to reduce legal risks.

In the Netherlands, national politics is not dominated by opportunists who use the smallest argument to block decision-making at any price. Those opportunists would not have a lot of support – after a sound process, following formal procedures, the remaining opponents primarily make use of their legal means, not their political influence. The independent court for administrative decisions (Council of State) has a reputation of requiring more assessments when in doubt about the right interpretation of the law. The unique formally independent Netherlands Commission on EIA (NCEIA) advises competent authorities on a case-by-case basis about assessments, and in case of appeals its advice is usually followed by the Council of State.

However, before this stage is reached, the democratic practice requires a more general process where reasonable alternatives are carefully reviewed, taking account of mitigation and compensation. Democratic support for this process of design and assessment, in iteration from rough to detailed, is dominated by a limited number of influential NGOs. These are involved in most of these processes, and observe how other, often more local or extreme groups are involved in processes for individual infrastructures. They usually have no interest in frustrating the process unless they want to make a case that a certain design and assessment practice is insufficient. Once in a while they show their teeth. Also the NCEIA may give its advice before formal documents are prepared (according the current legislation this is compulsory at least where nature reserves may be affected).

### **The dynamics of infrastructure planning**

In the administrative and political process, there are ongoing debates about infrastructure development. The budget is always insufficient to meet all requests for new infrastructure, and some roads are never seriously considered, despite bad infrastructure connections. Such may be the case where the adverse impacts are clearly unacceptable in the eyes of an obvious majority.

However, once in a while, it gets serious. If support for solving a specific transport problem increases, and infrastructure is widely claimed to be part of the solution, the government may decide to reserve budget for building. It may start with preparatory studies to determine possible solutions to the transport problem, and start the procedures required before the seemingly most adequate solutions. At this stage in Dutch practice, as probably is done in similar countries, a general project director is appointed. Her or his assignment is to determine the government's appropriate course of action in developing a solution to the transport problem, taking political support and procedures into consideration, and therefore taking content into consideration. Sometimes his assignment may be to develop a specific infrastructure and acquire support for a decision that the transport minister has already made but has no power to implement without consent. Sometimes the minister is genuinely interested in alternatives (at least this is how others may perceive his behavior). Since Cabinet is always a coalition and any new infrastructure has to be supported by Cabinet as a whole, the transport minister has to involve other relevant ministers, like those responsible for economic growth, nature conservation, spatial planning and environment. In the case of major infrastructures, usually a project bureau is established, which is composed of several ministries and led by the transport ministry. The project director may report directly to a group in Cabinet.

So what does the professional life of such a project director look like? To reach success, he has to convince skeptics among politically influential groups that the investment is in their interest or at least that it does not pay off to resist. (A convincing argument might be that they would lose credibility in the eyes of their own supporters.) He also has to convince the part of parliament that is concerned with budget approval that the investment will be worthwhile. (A convincing argument might be an uncontested cost-benefit analysis or a share of third parties, like municipalities or businesses that profit from the investment, in the construction cost). And last but not least, he has to ascertain that remaining opposing groups will have no legal ground for causing delays other than the time needed to create enough political support. Whether he succeeds, depends on whether an alternative can be developed that is acceptable in the eyes of those who have power to block decision-making. This is an interactive search process.

Such a project director can be compared with the captain of a ship that disembarks in a general direction, without knowing its precise destination. On board of the ship are not only the project bureau itself (that does most of the work), but also the other groups that need to be satisfied when the ship arrives at its destination. The destination is, of course, a decision that is a real step further. This may be the decision that the infrastructure actually will be built, but also the reverse or any other widely shared new perspective on the transport problem and its solution. If the transport minister has given directions that are clear but the project director cannot develop support, some other destination may have to be chosen somewhere in the process. If, on the other hand, the general direction for searching the destination is too unspecific at first, the project director may end up with concrete proposals that do not meet political expectations, and he then needs to ask for a new assignment. Since the destination is unknowable when the ship takes off, it is also unknown who precisely should be on board. As the ship sails, new coasts may be discovered that have their own population. The ship may need to have a changing crew as well.

The ship's general direction, as well as its destination, are content of planning and decision-making. What is the transport problem that an infrastructure is supposed to resolve, in which other ways may that problem be resolved, what are the costs and effects of alternatives, how are these related to legal standards and official policies that decision-makers and influential groups must answer for? Depending on findings during the voyage, the captain has to decide along the way how to adjust course, which alternatives to explore within his political assignment. He must do so based on his assessment of how politically influential groups evaluate the current impacts. To have that information, he has no choice but to organize some kind of interaction with these

interest groups. The content emerging during sailing may still have surprising reactions from influential groups and therefore parliament. If new ship's courses, needed to avoid these cliffs, do not meet the expectations the transport minister has created earlier before his electorate, it may be necessary to consult him again. In the Dutch situation, this might result in considerable loss of time, since procedures may have to start over again: new alternatives, new procedures. Sometimes content emerging along the sailing voyage may have unanticipated legal implications. Frequently, new laws are implemented, or existing laws are interpreted in new unexpected ways, changing the legal conditions for approval. Some formal input of consultation that initially seemed a detail may turn out to create legal problems after all. The concerned groups may require more attention and extra compensation. The ship has to navigate through an unmapped and constantly changing field of cliffs of procedural, process or content nature.

The three rationalities of procedures, process and content are created by three different social subsystems that are activated by the project bureau: the legal system, which is mainly composed of lawyers using legal rationality, the governance system, which is composed of politicians, lobbyists and administrations (and their supporters), and the knowledge system, which is composed of experts in the field of road design, economy and environment. Because the legal, political and knowledge rationalities have an entirely different basis, it is necessary to activate these systems which don't easily amalgamate to a single rationality that serves decision-making. The three rationalities remain at odds right until decisions are made. Each of these subsystems of the project has to take developments in the other subsystems into account; in the perception of one subsystems developments in the other subsystems are always unpredictable and can form a risk.

### **The Zuiderzeelijn evaluation**

So, content, process and procedure should all be aimed at the same general direction, or the project bureau will not reach any clear destination. If one rationality requires a change of course, the others must follow, or time and resources are lost on ineffective procedures, debate or study. In 2006, the transport ministry decided to evaluate the SEA process of a major rail line (called Zuiderzeelijn), which would connect the economic center of The Netherlands (the western part, with the main airports and seaports) to the north, which was economically lagging (X, 2006). The north had had a strong lobby. It made a deal that it would receive economic assistance from the national government to receive equal development chances to the rest of The Netherlands. At some point, a proposal to develop the Zuiderzeelijn emerged and it received strong support from the north. Local governments in the north were willing to share in the cost and several national political parties were prepared to support further pursuit of this infrastructure. However, other parties and regions in The Netherlands were skeptical, as well as national NGOs that had no specific relationship with the north. Also a practice had developed (after frustrating experiences with previous infrastructure planning processes) of social cost benefit analysis (SCBA) (De Jong & Geerlings 2003) and interactive planning, with detailed consideration of spatial alternatives and their impacts (including environmental impacts). The general spatial planning law and the SEA Directive provided a formal structure for the process and interaction with the wider public, but it did not yet provide for a formal statement specifically and only about environment.

The original assignment of the project director was to develop a so-called 'spatial planning key decision' for the Zuiderzeelijn. This was a binding but conditional decision about an infrastructure. It was decided that in anticipation of the implementation of the SEA Directive, and environmental statement would be made. Since the decision was conditional upon future project decisions that would require an EIA, the spatial planning key decision was considered to be an SEA and not an EIA. The project director developed several alternative ways to connect the North to the West with a rail line, and these ways were developed in more detail in an interactive process where a

core group of actors (in particular governments) were consulted regularly about progress, and the wider public was consulted a few times. This was done in different teams that focused on different aspects. One was an SEA team, another made a social cost-benefit analysis for each alternative. The financial component (are there also actors who are prepared to finance the emerging alternatives) also received special attention.

At a certain point influential actors (a committee of former politicians and academics that had been voluntarily assigned to create support for the outcomes, as well as the NCEIA) proposed that there may be more efficient ways to help the north. Their ideas were widely supported and Cabinet was forced to widen the project director's assignment to include completely different, non-infrastructure alternatives. The ministry of economic affairs became more important in the project bureau, since these alternatives concerned their expertise. The content of cost-benefit analysis, SEA and planning shifted completely (leaving infrastructure alternatives intact without further elaboration). The new alternatives concerned the support of investments that already were under way but not feasible without government support, and the project bureau could make use of available knowledge. It performed an environmental assessment by means of an expert panel. Because the content shifted, other affected groups in the north had to be involved. The political conclusion was, that there was insufficient reason to believe that building a Zuiderzeelijn would be in the public interest, whilst the other alternatives required no 'spatial planning key decision' and would be postponed to the next Cabinet. The SCBA and the SEA of the rail alternatives had contributed to a major shift in the process. The formal decision to be made would not be a spatial planning key decision, since the alternative chosen for further pursuit concerned no major infrastructure.

The Zuiderzeelijn case was taken as point of departure for a discussion among SEA team leaders of several project bureaus for different infrastructures. Their conclusion was that the SEA had nicely fitted the general problem description of the project director, and had not led to any delays to the general process. On the contrary, it had contributed to insights that many infrastructure alternatives would be difficult to accept for many parties, whilst there may be better ways to help the north.

As regards procedure, the SEA as a separate component of the project bureau was seen as an added value, since it created more transparency for the interest groups adversely affected by it. It contributed to a process focused more on involvement of the public and lower governments to fit the infrastructure in their environment. Legally, such a process may also have been done without mandatory procedure, or the procedure may also have been followed without extra consultations. Yet, the fact that an SEA procedure needed to be applied had its effects on the process and therefore content, contributing to an unexpected decision, a new coast had been discovered so to say. There also were some legal risks to be considered in the SEA. For example, if it would be necessary to do an appropriate assessment according to the requirements of the Bird and Habitats directive, at this stage of planning. The conclusion was that this would only be necessary if an alternative actually under that directive (affecting certain protected areas) would be selected for further development. Since this was the case, it is not known if that may have created legal problems in further stages of planning.

One of the other cases used to illustrate the points that were made by the SEA team leaders, was the extension of Rotterdam port. There, the situation was completely different. For about a decade, this extension had been under debate, and was politically accepted. During the planning procedure, the EU air quality and birds and habitat directives had come in force, some smaller groups protested (most notably local fisherman) and the administrative court turned the decision around. A year was lost, and in this year a new SEA had to be made, which was almost a formality. Major parts of the information that the court had required, had already been available

but not reported as part of the formal SEA. Here, the question may be asked whether this might have been foreseen, because then it would have been easy to prevent delay.

### **Lessons: three systems**

The main lesson is that project directors for large infrastructure should take into consideration that the process consists of three components (content, interactive process, procedure) that are not automatically linked and therefore these linkages and balance between these components need his attention. Ignoring these links creates a risk that what one component produces becomes obsolete and outdated. A new reality, created by one of the other components, then takes over. The components need to be separate because they depend on different social systems that have a natural difficulty of cooperating since they have a different basic rationality. The legal system produces its own independent rationality in the course of procedures; it is based on the law culture in a country (e.g. Backes e.a. 2006). The governance system is the network of governments that have to agree on a complex project before it can be implemented, and which rely on political support that is created in an interactive process. The knowledge system is the system of experts that produce content. Knowledge institutes may be very influential if they have a monopoly on certain knowledge. On the other hand, knowledge is often used to provide arguments for positions that already have been taken. A fourth system might sometimes be the private financing system, if approval by the government is contingent upon private co-financing.

In the case of the Zuiderzeelijn, the knowledge system produced the arguments (through social cost-benefit analysis and SEA) that the position taken by the government was not based on sound arguments. Because the project director ensured that the assessments were linked to the interactive process, the ship was able to change course and head for non-infrastructure alternatives. The SEA done for the infrastructure alternatives had contributed to the cost-benefit analysis, and to support in the governance system for the shift of course. In the case of Rotterdam port's extension, the issue of fisherman had been spotted too late as a legal risk, and without changing course a delay of several years occurred. The main skill a project director should have is perhaps to spot cliffs (be it created legal, governance or content) as they emerge, identify the implications for the other systems, and ensure that the whole ship changes course, not just one of its components. The components, the legal, governance and knowledge subsystems, are all focused on their own rationality, and they cannot do that so easy by themselves. It might not always be easy to avoid cliffs, as the Rotterdam case shows, but the skills of project directors are widely recognized and accepted. The failure to develop the Zuiderzeelijn was actually seen as a success, since the mistake of developing that infrastructure had been avoided.

In The Netherlands, experience with planning of complex infrastructures has led to a body of expertise in its own right. Planning of infrastructure is a profession in its own right. SEA team leaders should assist the project director, and have the similar skills, with relatively more focus on the SEA procedure, its process and content. Focus now is on the streamlining of procedures to ensure that the legal component does not create so many cliffs that no ship can arrive at its destination. Also, private co-financing is increasingly considered a necessity, but linkage of that social system to the planning process has not succeeded yet. This is presently a focal point for improvement.

### **References**

Backes Ch W, A.A. Freriks, A.G.A. Nijmeijer, March 2006. Article 6 Habitats Directive – A comparative law study on the implementation of art. 6 Habitats Directive in some member states Rechtsvergelijkend onderzoek implementatie artikel 6 Habitatrictlijn.

X, 2006. Evaluatie van SMB Zuiderzeelijn.

De Jong, M. and H. Geerlings (2003): The remarkable return of comprehensive policy analysis for transport infrastructure to the centre of administrative practice; how the success of O(E)EI exposes weaknesses in public participation in the Netherlands, in: *Impact Assessment and Project Appraisal* 21 (4), pp. 281-291, ISSN 1461-5517.