



# G-fors Dutch national report

Strategic Environmental Assessment  
Particulate matter

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## **Part 1: The Dutch SEA case**

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## 0. Strategic Environmental Assessment in the Netherlands

The Netherlands can be considered a pioneer in environmental impact assessment and strategic environmental impact assessment (Coenen, 1999). The EIA Decree is part in the Environmental Management Act since 1994. In September 2006, the new legislation for SEA for plans and programs has become effective according to the European Directive 2001/42/EC. But the Netherlands have already gained much experience in the field of SEA and has already been using environmental assessment for spatial plans or strategic memoranda before the European SEA Directive came into force on 21 July 2004.

In historical context, the use and implementation of SEA in the Netherlands goes back to the formative stage of SEA, wherein under the EIA Decree there has been an obligation to carry out an EIA for a number of spatial, sectoral plans and programmes. These included national plans on waste management, electricity production, land development and drinking water supply, regional plans on waste management and the location of new housing and industrial areas. Traditionally, these plans were developed in open, structured processes, including public participation and consultations with (environmental) agencies.

Currently, the Netherlands has two tools: the E-Test (Environmental Test) and EIA for Plan-level. In this text it is referred to as SEA. SEA is a legal requirement. SEA is carried out for specified plans and programmes. These include sectoral and spatial plans e.g. National plans for waste, electricity, water supply, regional plans, new housing locations, industrial areas, etc.

The Strategic EIA for specified plans and programmes follows a mandatory process, including examination of alternatives, public involvement in the scoping and review phases and review of the quality of the information by the independent Commission for Environmental Assessment (NCEA).

The NCEA (Netherlands Commission for Environmental Assessment) is an independent expert committee and involved in all EIAs and a number of SEAs, checking compliance with legislative requirements for EIA/SEA and the quality of information provided. It is a private foundation having its own budget funded through government subsidies (NCEA, 2007). The work of the NCEA is based on two principles: expertise and independence. Therefore it plays an important role in the quality management of both EIAs and SEAs. The NCEA advises decision makers (government ministers and provincial and municipal councils) on the environmental aspects of plans and projects at review stage and to a certain extent on Terms of Reference for EIA and Strategic EIA and on process aspects.

Since September 2006 the new SEA regulation is in place according to the European Directive 2001/42/EC and the original SEA process has been simplified in the following way:

**Screening.** Screening for SEA is based on positive lists of plans and programmes that set a framework for EIA. These plans and programmes are subject to SEA. Plans or programmes on this list have to be screened on a case-by-case basis. In addition, SEA is also required for plans and programmes that affect protected areas, or more precisely, when an “appropriate assessment” (in Dutch: *passende beoordeling*) has to be undertaken according to the EU Habitat Directive. In such cases, the appropriate assessment becomes an integral part of the SEA.

**Consultation in SEA.** At the scoping stage in SEA, the competent authority is not obliged to provide guidelines for the SEA, as it is for EIA. Neither is it obliged to organise public consultation. But the competent authority does need to consult with relevant government authorities on the scope of the assessment.

**Scoping** The Netherlands has a independent expert body, the Netherlands Commission for Environmental Assessment (NCEA). In the present EIA legislation, this Commission has a statutory role in the Dutch environmental assessment system. It advises the competent authority in the scoping stage (on guidelines for the environmental assessment) and in the review stage (on the quality and adequacy of the environmental report). The NCEA provides advice in each EIA procedure. In SEA, the NCEA's involvement is obligatory only if a plan or programme affects a protected area, and only in the review stage. However, the NCEA can also be involved on a voluntary basis, at the request of the competent authority. In practice, it seems that in many cases a scoping document is produced on a voluntary basis, and so far in most cases, this document is also voluntarily submitted to the NCEA for review. In some cases the scoping document is also submitted to public consultation.

**Review** Review of the SEA, similar to the EIA process, must include publication and a public hearing, as well as consultation with the statutory advisors. The plan and SEA scoping report have to be released to the public at the same time. Participants can submit their written responses on the plan and SEA to the competent authority, and voice their concerns at the hearing. Review by the independent NCEA is obliged in case the plan or programme is in or affects a nature area.

**Content of the SEA** In terms of the content of EIA and SEA reports, there are a few differences. An EIA study in the Netherlands should include an analysis of the most environmentally friendly alternative. In an SEA alternatives also have to be elaborated, but a most environmentally friendly alternative is not mandatory. Furthermore, the legislation states that the SEA should be tailored to the decision-making phase and the hierarchy in the planning process. This means that the scope of the SEA should match the scope of the plan.

Strategic Environmental Assessment (SEA) has a similar set-up to EIA, but focuses on environmental assessment of plans and programs. The underlying thought is that environmental consequences should already be considered in the strategic decision making process, a level up from projects.

The introduction of the SEA regulations in the Netherlands has introduced a new category: a category requiring SEA but not EIA. Some plans require SEA, because likely impacts on protected nature areas make an appropriate assessment necessary.

That is why it is important to know whether research into the impacts on protected areas, under the Nature Conservation Act, is an 'appropriate assessment' or a 'preliminary review' in the orientation phase. That is the deciding factor whether or not SEA is required. A preliminary review is meant to find out whether negative impacts on protected areas can be excluded in advance. If the answer is affirmative an appropriate assessment will not be necessary and a mandatory requirement to conduct an SEA will be revoked. The NCEA states that the best approach is to start an SEA whenever there is any doubt as to the significance of the effects. In that situation the research will be included in the SEA procedure. In certain specific cases, the NCEA



believes it would be more efficient to carry out an extensive preliminary review concerning the effects on natural habitats. Especially when the expectations are, that impacts of the plan will be small (insignificant) and the SEA procedure will not provide any added value.

As we will see in the case description, the Lauwers Lake area is part of several overlapping strategic decisions, that all need a SEA.

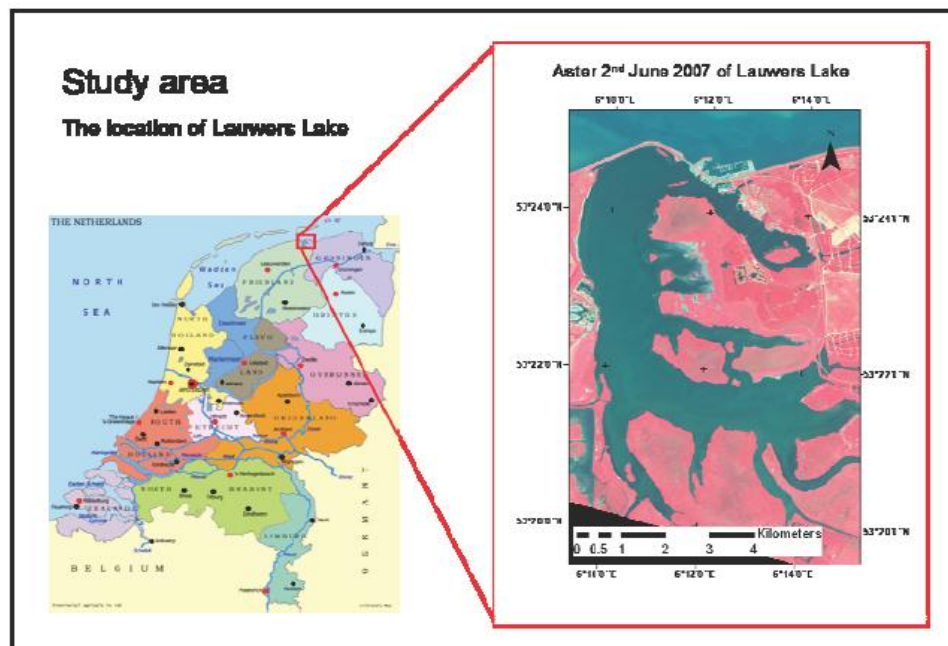
## 1. Context and Conditions

### 1.1. Introduction

The Dutch SEA case concerns the strategic assessment of a number of principal decisions concerning the water management for the Lauwers Lake area (in Dutch Lauwersmeer gebied). These decisions are necessary to either avoid or solve problems in water management and nature protection in the area.

The Lauwers Lake area is a designated to be a future Natura 2000 site since 2003. It is located in the outermost north of the Netherlands and size approximate 6000 hectare. Its estimated 2000 hectare brackish water area inhabits a rich mixture of fresh and saltwater marsh species. Additionally, the area is an important habitat and hatchery for protected birds. The present state of the area is the result of a century's old series of human interventions such as diking and land reclamation.

Figure 1. Map of the area.



The opposing interests in the case can be derived from the characteristics of the area and its history. The heart of the Lauwers Lake area with around 310 km<sup>2</sup>, is the former estuary of the Lauwers Sea and the flood plains area of the River Lauwers is still a wetland. The open wetland with dykes is surrounded by a pattern of reclaimed

land in the past centuries. Apart from the wetland and the marine clay polders the area has former fishery villages, dyke villages, recreation parks, a military practice area, dwelling mounds, sluice villages, rivers and waterways.

The history of the Lauwers Lake is closely related with the flood disaster of 1953. After the flood in the Netherlands major infrastructural works were undertaken to prevent the country from storm tides. The damming of the Lauwers Sea in 1969 made a lake of the former Lauwers Sea.

Already at the end of the nineteenth and at the beginning of the twentieth century, plans were made to dam off the Lauwers Sea. But these plans were not carried through due to economic and political reasons. After the flood disaster of 1953 the politicians of the province of Groningen agreed that it was high time to dam off the Lauwers Sea. The most important argument was the safety of the people of the provinces Friesland and Groningen. The risk of the surrounding land flooding during a storm tide was too high. There were two possibilities to close off the Lauwers Sea: the embankment of the surrounding seawalls or the construction of a dam. The embankment of the seawalls was more favourable to nature and fishing, but the inhabitants of Groningen and Friesland preferred a dam as it would be safer. A dam was chosen under pressure from the population. In 1960 the 'Reclamation order of the Lauwers Sea' was accepted. The work started in 1961 and was finished in May 1969 consisting of a dam of 13 kilometres in length with outlet sluices and a lock.

#### *Consequences of the damming for the different interest in the area*

The first interest that was seriously affected was nature. The damming off of the Lauwers Sea had major consequences for nature. The lake is kept at a constant level of one meter below Amsterdam Ordnance Datum (NAP). As a consequence the former salt marshes and sand-flats have dried up. The main gullies are however still navigable water. Because the new lake was closed off from the sea, the water slowly became brackish, which changed the environment. This process can be compared with what happened to the waters of Zeeland after the completion of the Deltaworks. Furthermore, the seals who loved to abide in the Lauwers Sea lost their home. They had to leave for other parts of the Wadden Sea.

The Lauwers Lake grew into a beautiful nature reserve, in spite of the huge influence on the environment and the fact that the area was neglected for the first couple of years. It wasn't before 1980 that an active nature policy was set out. For instance cows and sheep were led out to pasture on pieces of land; at first only in the summertime but later on the whole year round. New species of birds and freshwater fish were attracted to the area. The freshwater fish made the area attractive for other birds such as spoonbills, cormorants and diving ducks seeking their prey. The nature reserve also became home to other animals such as moles, roes, rabbits and foxes. Where a unique piece of the Wadden Sea area was lost, a beautiful new nature reserve arose. This was confirmed when a large part of Lauwers Lake officially became a national park on November 12th 2003.

However, this new nature is threatened in the future. The fresh water influxes from the provinces of Groningen and Friesland, and the shut off water from the sea cause the decrease of the salt content and the spread of bushes and forests. This is problematic for the environment of the area because it leads to the decrease or loss of the saltwater marsh character and the typical saltwater marsh species. Another problem is the increasing loss of the wetland as a natural habitat, which has a negative impact on the bird population (Arcadis, 2003).

The second interest that was threatened was fishery. The village of Zoutkamp, which partially lost its function as a fishing port to Lauwersoog, is build on the artificial island used for the reconstruction of the dam. A harbour was constructed near the locks, and this is also the site of the most recent village in the Netherlands: Lauwersoog.

A third interest that gained from the close off was recreation. Lauwers Lake has not only become a unique nature reserve, it is also a well visited recreational area. There are many recreational facilities such as holiday parks, camp sites and sailing schools. The area is also used a lot for water sports like sailing and surfing. Recreation forms a substantial economic sector in the area. There are also some other economic activities, for instance clay is extracted for a brick factory.

Part of the Lauwers Lake area is used for agriculture and agriculture is an important sector in the local economy. In this area farming is still profitable but there is a continuing need for re-structuring and enlargement. This process can threaten the typical patterns of land use and the farm yards and buildings.

A further interest in the area is the use for military training exercises. On the eastern shores of the Lauwers Lake is the Marnewaard, an exercise area of the Royal Netherlands Army.

And finally, a major interest of the Lauwers Lake area is its role for water quantity management. As mentioned above water quantity management was the main reason to close off the Lauwers Sea. The Lauwers Sea was the estuary, where the water from the provinces Fryslân, Groningen and Drenthe entered into the Wadden Sea. Goals of the close down from a water management perspective were a better protection of the provinces of Groningen and Fryslân against high tides and the use of the Lauwers Lake to improvement of the run off possibilities of the Frys outlet area through the use of the Lauwers Lake as in between outlet area (maximum water level 0,0 m. NAP) at high outside water levels and heavy precipitation.

## ***1.2 Case History***

### *The triggers for the start of the process*

At the end of the last century developments in all the mentioned interests coincided. Something had to happen with the area from a water government perspective because of climate change, sea level rise, change in precipitation and the process of a drop in the level of the land as a consequence of natural gas exploitation.

But also from a nature perspective changes in water management were thought to be necessary. New flora and fauna appeared as the Lauwers Sea gradually became a freshwater lake, and the area grew into an international recognized nature area. To protect this new and young nature area, it was decided (12 November 2003) to designate the Lauwers Lake as a national park. The aims of a national park are to keep valuable nature and to let people enjoy this nature. A national park gets extra money for information, research projects and nature-specific recreation. For a national park there is a specific government arrangement and management plan (see further in section 4).

This interest in the new nature value of the area also meant that it became part of the national and European nature policy and that specific nature goals for this area have to be formulated. Natura 2000 is the generic term for the European Birds and Habitat Directive. The Natura 2000-network is an extensive European network of areas which are protected by the Birds and Habitat Directive. The aim of the Birds Directive is the

protection and the management of all wild birds and their environment on the territory of the European Union. The aim of the Habitat Directive is to maintain the biological diversity in the European Union. The Habitat Directive is related both to the protection of animals and plant varieties, and the protection of areas in which specific animals or plant varieties or environments (habitat) are present, such as the Lauwers Lake.

The Dutch want to designate about 162 Natura 2000 areas, but not at once but in successive trenches. The Lauwers Lake is one of these foreseen areas. Under the Dutch Nature Protection Law 1998 the Lauwers Lake was already a protected nature monument. Activities in or near protected nature monuments and in the future Natura 2000-areas which can be damaging for the nature values of such a area, cannot take place without permits.

A Rijkswaterstaat department north (Agency of the Ministry of Transportation and Water Management) study looked into the possibilities to recreate original natural habitats of the Wadden Sea that were lost because of the construction of dikes and dams along and in rivers and river mouths. Particular natural transition zones between salt and fresh water, the so-called brackish water zones. And nature areas that through the construction of dikes lost the difference between high and low water and flooding during high water periods. Lauwers Lake was one of the possible areas to do something with estuary restoration.

From the nature side and the nature Park the idea appeared to reintroduce salt water in the area by introducing a limited form of tide. Research had shown that this would be positive for nature. Because of the salt water and the tide bushes and trees are not able to grow anymore. In this way the area stays open without too much forest and bushes. This is positive for most of the wished bird- and plant species and would in this way contribute to the goals of the Birds directive and eventually Natura 2000 by creating optimal circumstances for the specific bird's population in the Lauwers Lake. Without the salt water influx forests and bushes will keep on growing.

The goal of the Water Framework Directive (WFD) is to ensure that the quality of the surface water and groundwater in Europe reaches a high standard ('good ecological status') by the year 2015. According to the WFD the restoration of fresh water-salt water gradients in deltas and former estuaries could contribute to the WFD goals.

In the remainder of the report we will refer to the discussion of making the Lauwers Lake more salt again and/or recreate some form of tide as the *nature discourse*.

The other discourse, we will refer to as the *water management discourse*, is the discourse about best way to deal with the water quantity problems. Within the water management discourse the water board Friesland and the province of Fryslân initiated a research project how to deal with the future water situation. Especially the need to store water and to run off water based on national goals for water storage (WB21). The water system in the Lauwers Lake is now arranged in a way that under normal circumstances redundant water from Fryslân and North West Groningen can flow to the Wadden Sea through the Lauwers Lake without pumping. Through the autonomous processes mentioned before (sea level rise, drop of the level of the land and another precipitation pattern (more rain in the winter, less in the summer)) this is no longer possible in the future. In the long run (2030) the construction of new infrastructure or the adaptation of existing dikes and pumping stations is needed.

Changes in the water management necessary for nature can potentially threaten the water outlet to the Wadden Sea. For instance a possible water level change of the Lauwers Lake has consequences for drainage and water storage in the rest of Fryslân.

But what really brings together these two discourses is the development of the societal and economic activities (recreation, agriculture) in the area as mentioned above. These other activities depend on the level and quality of the water. Salt water influences agriculture and for instance camping sites are threatened by the water level.

So ideas and alternatives how to deal with the area came from different directions. The case starts with the recognition at the beginning of this century that these necessary measures for nature, water management and social and economic activities in the area ask for some form of balancing in the development in the area. The first provincial area plan Groningen ((Provinciaal Omgevingsplan POP) in 2000 formulated as a goal the development of a vision for the Lauwers Lake with specific attention to the water household and the recreation.

#### *The goals of the water vision*

In 2001 the provinces of Groningen and Fryslân and the water boards Noorderzijlvest and Fryslân decided to prepare a policy document that would lay down the future water management in the area: the so called water vision Lauwers Lake.

The provincial government of Groningen initiated the vision after it had approved its own provincial area plan (POP) in 2000. The partners created a new government arrangement the Administration Deliberation Commission Water Vision Lauwers Lake (Bestuurlijk Overleg Watervisie Lauwersmeer: BOWL).

Goal of the Water Vision process was to come to a common decision on the future of the Lauwers Lake area. The Water Vision is influenced by the European, the national, the provincial and the local policies. The water strategy had to be chosen given the following goals and conditions that came from an inventory among the stakeholders:

- The maintenance of the security standard and preventing overflowing or floods;
- The neutralization of the effects of a drop in the level of the land, the rising sea level and heavy rain;
- The maintenance of the existing water run off into the Lauwers Lake;
- Creating a direct water run off into the North Sea;
- Maintaining the capacity of the area as a flood control reservoir;
- The conservation and development of the ecosystem, and the management of dynamic tides;
- Restoring the salt content;
- Minimizing the damages and losses of agricultural land, recreation areas, commercial fishing, shipping, and security;
- The conservation of the current land use functions.

#### *National Park Management Plan*

The Lauwers Lake was officially installed on the 12<sup>th</sup> of October 2003 as the national Park Lauwers Lake to be established. This was also the start of a new government arrangement. The designation as a national park meant the recognition of the Lauwers Lake as an area with a special meaning for nature. It can also be seen as an expression of the intention of the different interest groups to work together in the management of the area. Only through cooperation between government, nature organizations,

landowners and interest groups the area can function as a National Park that suits everybody's wishes.

The park is supervised by the so-called Council National Park Lauwers Lake (Overlegorgaan Nationaal Park Lauwersmeer) in which all cooperating parties are represented. The most important task of the council during its start up phase was drawing of the park area management plan. This so called Beheer- en Inrichtingplan (BIP) did not replace existing plans or plans in preparation, but was meant to integrate and coordinate as much as possible these spatial and management plans. The choices in the plan have been made on the basis of agreement among the council members. The Park Management Plan Lauwers Lake aims on the conservation and the strengthening of the core values of the area. Those core values are: the rest and the space in the area, the grand landscape, the water character, the dynamic environment and the enormous bird wealth. For the conservation of these values on the long period from ecological point of view a modification of natures has been needed and water management. According to the plan the best guarantee for the strengthening of nature is allowing a mastered level fluctuation, preferably in combination with an influx of salt water in the area.

#### *The 'Water Vision' planning process*

The analysis of the several water policies and its likely impacts, contains three phases which are supervised by a special project team. The team members are representatives of the provincial governments of Groningen and Friesland and their water authorities, Rijkswaterstaat, department North (Agency of Ministry of Transportation and Water Management), the Ministry of Agriculture, Nature and Food Quality as well as their regional agency Staatsbosbeheer.

The basis for the Water Vision was lead in three research phases in the period from 2001 to 2006. In 2001 the research started with an inventory of (ongoing) research and policies concerning the Lauwers Lake area:

- In *phase one* a water hydrological investigation was conducted to understand the mutual influence of the Fryslân run of, the Groningen and the Lauwers lake area. The effects of a number of alternatives for future water management were calculated. An important conclusion was that for a secure water management from 2030 onwards a pumping station in Lauwersoog is needed.
- In *phase 2* the technical-hydrological analyses was refined and an ecological, social-economic and spatial assessment of the alternatives took place.
- Next in *phase three* extensive researches addressed the question if the subdued tide would lead to positive results for nature. Next to this, the question was investigated if the sand banks would grow together because of the sea level rise. Further in phase 3 an extensive cost-benefit analysis was conducted concerning the alternatives.

All this research took place under the coordination and responsibility of the BOWL (see section 3 government arrangements). After phase three the following alternatives were left:

#### *Reference situation 2030:*

This alternative means implementing all planned measures in Groningen and Fryslân like additional storage capacity in the hinterland and dike elevation. The existing water level in the Lauwerslake of NAP -0,93 m is kept as much as possible. The consequences for the nature are unfavorable.

### *Zero plus*

This alternative looked into the possibilities to create some tide for nature development under the condition of continuing the existing water management. It shows that it would bring only very limited positive effects for nature. The added costs compared with the alternative 'Reference situation 2030' are €2 million.

### *Subdued Tide++*

This alternative concerns a creation of a tide with salt water between NAP - 0,93 m and maximum NAP + 0,4 m in consideration of the optimal developments possibilities for nature. This alternative involves pumping stations at Lauwersoog, Dokkumer Nieuwe Zijlen and Electra to guarantee the water run off. This alternative is unfavorable for agriculture in the neighborhood of the Lauwers Lake, because of the increase of salt seepage. For nature this alternative would be the most favorable. The alternative costs €475 million more compared to the 'Reference situation 2030' alternative. From this budget about €380 million concern investments for nature.

### *Subdued Tide+*

This alternative concerns a creation of a tide with salt water were the water level does not exceed -0,10 NAP to keep the costs down. This alternative involves no pumping station at Lauwersoog. This alternative is unfavorable for agriculture in the neighborhood of the Lauwers Lake, because of the increase of salt seepage. For nature this alternative is more favorable than the alternatives 'Reference situation 2030' and Zero plus, but considerable less favorable than alternative Subdued Tide++. This alternative costs €165 million more compared to the 'Reference situation 2030' alternative.

### *Water management strategy Friesland*

On the basis of its research since 2003 the water board Fryslân made a proposal what would be necessary in the future. The measures that are needed for 2030 are based on national guidelines and standards and can be divided into measures necessary for the higher areas and the polders (for instance capacity polder, pumping station, water storage) and for the water outlet area (surface, retention areas, renovation and building new pumping stations).

The provincial council decided in January 2007 to speed up the 2030 measures, and:

- create as soon as possible water outlet possibilities to the Wadden Sea at Harlingen and Lauwersoog;
- make security the leading principle in the work on the banks and dikes;
- take as a principle that creating more water storage capacity (retention areas) has to take place on voluntary basis.

### *The 'stroomlijnen' alternative*

The end report of the study 'Hold, store and remove' by the water board Fryslân and the point of view of the Fryslân provincial board about this study, lead to a plea from the nature protection organizations for a more natural way of water management.

Together they produced the alternative Stroomlijnen (Streamlines) that advocated not looking only in the direction of trying to lead water as soon as possible to the sea, but choose for measures which contribute also to the water quality improvement, nature development and an attractive environment to live, work and recreate in.

This alternative can be seen as a common position of the northern nature protection organizations concerning current topics in the water policy.

#### *The SEA and the Water Vision Plan*

The Lauwers Lake is a Natura 2000 area which means it has a special ecological value. Additionally, the final Water Vision plan will be part of the provincial area plans, the POP of Groningen and the Streekplan of Fryslân. For that reason the Water Vision Plan is subject to the SEA procedure (MER, 2005).

The SEA scoping report presents four likely policies: No change of the water management, influx of fresh water during the winter months, influx of salt water during the winter months and controlled tide. The draft mainly explains the possible instruments and techniques to realize the policies and the legal framework of the Water Vision Plan as well as the cost and the impact of the policies (Arcadis, 2005).

As required in Dutch SEA law the initiators of the SEA are obliged to consult the EIA commission and the public. In September 2005, the provincial authorities of Groningen and Fryslân published their SEA scoping report for the public and the NCEA (Arcadis, 2005).

The Dutch EIA commission (NCEA) replied that that the initiators should be more explicit about the expected problem situations and the problems and suggested to optimize four main alternatives, in line with the nature and water objectives (still to be defined in clear terms), and to consider all possible measures. This is how to reduce the number of alternatives that have to be compared with each other. The NCEA also recommended adding an alternative, prepared by the nature conservation organizations. In some alternatives the Lauwers Lake will turn brackish. In the SEA, the effects on ecology in relation to the current directions for the protected area Natura 2000 Lauwers Lake, will have to be discussed. Finally, the NCEA commission asks the initiators to note the main targets of the Bird and Habitat directive (MER, 2005).

There is a stapling of SEA's on decisions concerning the Wadden Sea, so also including the Lauwers Lake area. Particular on natural gas exploration in the Wadden Sea and an SEA procedure for alterations to the national spatial plan of the Wadden Sea.

The Dutch cabinet's viewpoint is that the exploration of gas from fields beneath the Wadden Sea and the Lauwers Lake should in principle be possible, on condition that it remains within natural boundaries. Practically at the same time as the advice on gas exploration, the government started an SEA on spatial key decisions for the Wadden Sea. A major discussion around the SEA for national spatial key decision Wadden Sea is lacking conservation targets for qualifying species and habitats. A second question is the insight into the intervention-effect relationship, between activities in the area and qualifying habitat and/or species: i.e. which mechanisms will be effected, what is the magnitude of the effect, on which scale, how long will the impact last and how long will it take to recover?

#### *Decision making and political discussion*

On the basis of the research results the BOWL has chosen on 13 November 2006 for the Subdued Tide++ alternative for the Lauwers Lake. This alternative was chosen under the condition that all interests, like agriculture and recreation, are compensated



and that national government stands in for all costs. BOWL is however only an administrative advisory committee and no governing body with decision-making power. The actual decision concerning the future of the water management on the Lauwers Lake is taken by the provincial councils of both provinces.

First both provincial boards (Colleges van Gedeputeerde Staten) adopted a position concerning the BOWL-decision. The board of Groningen shared itself behind the point of view of the BOWL, however, under strict conditions, particularly financing by the national government. If there would be in September 2007 (Prinsjesdag) nothing in the national budget 2008, the plans for nature development by means of a subdued tide would have to be cancelled. The board of Fryslân have indicated that they rather not have a subdued tide. However, in case of financing by national government they are prepared to cooperate.

During the meeting with their provincial council two members of the Fryslân board withhold their explicit support for the BOWL viewpoint. In Fryslân the provincial council in February 2007 decided on an amendment that there should not be subdued tide in the Lauwers Lake and that a pumping station must be built in the short term on Lauwersoog to guarantee the Frys water run off.

Also the water boards have adopted a position. The water board Noorderzijlvest rather wanted no subdued tide, but was prepared to co-operate on this alternative under the same conditions as the province Groningen Water board Fryslân wants none subdued tide. Further in the BOWL the water boards took the position that they do not want to cooperate in other scenario`s then the reference 2030 alternative, unless all additional costs are fully compensated. This basically means that all additional costs above what is strictly necessary for quantitative water government are labelled as nature development costs and have to be paid by the national government.

Although in Groningen the provincial council agreed with the BOWL-proposal, there was still a deadlock in decision making because there can only be one water strategy for the Lauwers Lake area. In Groningen the board reconsidered its position as a result of the Fries point of view and questioned if they want to hold on to a subdued tide hold. The board decided that they want to keep striving for a subdued tide, but given the political reality first go for the construction of a pumping station on Lauwersoog. This would take place then in 2015, instead of 2030 as was strictly necessary for water quantity reasons (see before).

This alternative is called 'the third way'. The idea is than that the pumping station besides its function for water management and security can also be used for water level fluctuations and possibly restricted influx of salt water on behalf of nature development. Because of the use of this pumping station for nature purposes a contribution from the national government is expected. The Groningen council has agreed with the decision of the board during its meeting of 14 March 2007.

In May/June the BOWL discusses the proposal to build a pumping station in 2015, and use this for pumping and nature development in the Lauwers Lake area.

During the beginning of 2007 it also became clear that there would be no national support for the subdued tide variant. There were national elections in November 2006 and during coalition negotiations between the political parties that would form the new government it slowly became clear that no financial room was created for these big forms of nature development. The 300-400 million needed were simple a too big part of the nature development budget.

And during the decision making on the spatial key decision Wadden Sea there was already an amendment in national parliament (Motie Atsma and others, October 2006) that made the use of salt water in the area dependent on the support of the agricultural sector.

An expert workshop was organised about this so-called third way alternative in July 2007 to discuss the hydrological and ecological consequences of the third way.

The situation now is that:

- it is not clear what the ministry of LNV is going to do with the Natura 2000 goals;
- not clear is what really is gained by fresh water- saltwater dynamics;
- it is still not clear what the negative consequences are of seepage salt for agriculture and if these effects could be compensated technically or financially.

Especially the province of Fryslân sees a crucial role here for the SEA. It could solve the political problem of the clear political no against salt by the provincial council amendment. The SEA could put all the information on the alternatives in a clear and objective perspective. A problem is that the alternatives have changed over the time compared with the SEA scoping report. The SEA asks for a comparison with alternatives that are clearly not feasible any more.

What is clear is that a decision on the Lauwerslake area has to be taken on the basis of the definitive SEA by subsequently the two provincial boards and then the two provincial councils. The result of this is incorporated eventual in the provincial area plan of the province Groningen and the provincial water house keeping plan of the province Fryslân. Originally the decision should have been part of the water paragraph of the Frys streekplan, but this plan was already adopted in 2006.

After the decision making in the provinces on the water management in the Lauwers Lake area, national government will decide on the Natura 2000 goals for the area, because these goals heavily depend on the water management.

## **2. The Action Arena**

### ***2.1 Involved Actors: Holders - their Resources and Roles***

An action arena is a particular action situation in which actors interact in a certain way, i.e. they exercise certain patterns of interaction leading to specific outcomes. The action arena in our case is the process leading to the decision on the water management strategy. A governance arrangement is a specific configuration of rule systems and actor constellations. Our action arena involves two new governance arrangements, the BOWL and the national park council along the existing traditional governance arrangement of provincial decision making. We will discuss the governance arrangements in section 2.3.

The final outcome of action arena is a strategic decision on the future water management strategy of the Lauwers Lake area that has to be lead down in respectively the water plan of the province Fryslân and the integrated provincial environmental plan of the province Groningen. The water management strategy is the final outcome of the process that results in institutional change and has an impact on the 'physical world'.

We first describe here the different actors and the qualities and resources they possess.

#### *Supra national administration*

The arena is influenced by international actors who are not directly involved in the decision arena but set international goals for the geographical area. The European Commission brings goals into the arena on the protection of biodiversity and the conservation, restoration and maintenance of natural habitats (Habitats Directive, Natura 2000 and Birds Directive) and the management of water quality (EU Water Framework Directive). Because the Lauwers Lake is also a wetland, the goals are also influenced by the Ramsar convention for wetland conservation and wise use of wetlands.

#### *National administration*

Several ministries are directly or indirectly involved in the water vision arena. The Dutch ministry of Agriculture, Nature Protection and Food Quality Safety (LNV) is responsible for nature protection by implementing the Nature Conservation Act (Natuurbeschermingswet 1998) which realises the EU and national nature goals. Under this law the Lauwers Lake area was first a protected nature monument, and later an national park and foreseen Natura 2000 area.

The Dutch Ministry of Transportation and Water Management is responsible for water quantity management. Here the goals from the National Water Management Agreement (Nationaal Bestuursakkoord Water WB21) are important as standards for measures in water quantity management. The ministry of LNV is also responsible for the connecting green areas (Structuurschema Groene Ruimte/Ecologische hoofdstructuur).

The Ministry of Environment, Spatial Planning and Housing (VROM) is responsible for environmental policy and spatial planning. We have to mention here the spatial key decisions (PKB) on the basis of Spatial Planning Act (1965) and the Fifth legal notice spatial planning 2000-2020 (Vijfde Nota over de Ruimtelijke Ordening 2000/2020). Particular the key decisions concerning the development of the Wadden Sea and specific gas exploration in the Wadden Sea. Goals for the Wadden Sea are led down in the third legal notice wet lands (Derde Nota Waddezee). The ministry of VROM is also responsible for the SEA. The SEA is mainly regulated through the Dutch Environmental Management Act and the Environmental Impact Assessment Decree. The national independent EIA commission (NCEA) advises both, the initiators of a formal EIA and a SEA procedure about the requirements and guidelines, and verifies the draft of the required SEA report.

Finally the Ministry of Defense has an interest in the area because the use a part of the Lauwers Lake as military exercise area. There goals can be found in the Structure plan Military areas (Structuurschema Militaire Terreinen).

#### *Regional administration*

A Dutch province represents the administrative layer in between the national government and the local municipalities, having the responsibility for matters of subnational or regional importance. The government of each province consists of three major parts: the *Provinciale Staten* which is the provincial parliament elected every four years. Elected from its members are the *Gedeputeerde Staten*, a college charged with most executive tasks, presided by the *Commissaris van de Koningin* or royal commissioner, appointed by the Crown.

The Lauwerslake lays on the border of the provinces of Frysland and Groningen.

Both provinces have many tasks that are related to the area in the field of provincial spatial planning, environment protection, water management, waterway maintenance, nature protection, regional economy, etc.

#### *Decentralised regional government agency*

Rijkswaterstaat is part of the Dutch Ministry of Transportation and Water Management that has been delegated the task of the practical execution of the so-called waterstaat, which includes the construction of waterways and roads and the maintenance of these. Their mission as a national agency is to provide 'dry feet, clean and sufficient water and a quick and safe flow of traffic'. The agency is divided in 10 regional, 6 specialist services and 2 special services. For the Lauwers Lake the Department North (Rijkswaterstaat Directie Noord Nederland) with their head office in Leeuwarden, the capital of the province Fryslân is responsible.

Staatsbosbeheer, the Dutch National Forest Service is the governmental organization, managing the natural heritage in the Netherlands. Their main goal is to protect nature. Staatsbosbeheer is a strong advocate to create or reclaim nature and to create nature reserves that are connected to one another (National Ecological Network). Staatsbosbeheer manages nature reserves in 15 of the 20 National Parks in the Netherlands, including the Lauwers Lake Park.

#### *Waterboards*

Water boards are functional democratic organizations that are established in the Netherlands for ages. They hold specific rights for regional water quantity and quality tasks. In the past there would be specific water boards for water quantity and water quality. In the last years there has been a wave of merges between water boards that led to fewer water boards. In the province of Fryslân only one water board is left who covers the whole province. In the province of Groningen there are two water boards and the Lauwers Lake falls under the jurisdiction of water board Noorderzijlvest.

#### *Local government*

The Lauwers Lake area is part of the jurisdiction of four municipalities (De Marne, Dongeradeel, Kollumerland and Zuidhorn). In the introduction we already eluded about the Dutch government system and the position of municipalities. They are co-responsible and/or co-implementer for a wide range of tasks that have a connection with the Lauwers Lake area. One of these tasks is local economy and specifically recreation and tourism. For this, since 1957, the recreatieschap Marrekrite exists, a cooperation body of the province of Fryslân and the 20 Fryslân municipalities, with the aim to foster in the Fryslân water country recreation and tourism, thereby taking into account the interests of landscape and nature.

#### *Private interest*

The most important private interests in the area are agriculture and recreation. The interests of the agriculture sector are represented by LTO, the Dutch Organization for Agriculture and Horticulture. Individual recreational businesses are represented by a collective organization, but the interest of recreation is also covered by the above mentioned recreatieschap.

#### *Environmental organizations*

As the second group of organizations from civil society we can distinguish the regional environmental federations: It Fryske Gea, Friese Milieu Federatie,

Miliefederatie Drenthe, and Miliefederatie Groningen. These organizations have as a general goal environmental and nature protection in their province. The Wadden Society (Waddenvereniging) is a specific regional nature protection origination that focuses on the protection of wet land Wadden Sea.

The goal of Natuurmonumenten and the Groninger Landschap is to protect the nature by purchasing nature areas. Natuurmonumenten is a national organization and the Groninger Landschap a regional organization.

Finally, the IVN consulting organization, largely run by volunteers, wants to contribute to a sustainable society by communicating to people and involving them in nature, environment and landscape.

The following table summarizes the main outcomes in the action arena.

*Table 1 Action Arena outcomes*

<b>Date</b>	<b>Document and Stage</b>	<b>Activity</b>	<b>Actors</b>
14 Dec 2000	POP Provincial area plan of Groningen	General provincial spatial and environmental plan. Contains the general provincial water management policy. Requests for a detailed research on best water management policy.	Provincial Council Groningen
21 June 2001	Exploration Lauwers Lake	Identification of the state of nature, examination of the fresh and salt water influx, investigation possible alternative water management strategies	Department of Public Works and Watermanagement Department North
03 June 2001	Environmental friendly water management Lauwers Lake	Identification of the state of nature, results of the current water management on functions and land use	Management Board Lauwers Lake (ONPL)
08 April 2002	Basic document Water Vision Lauwersmeer	Mapping and analysing existing water management policy and plans, development of alternatives	Provincial Council Groningen, Provincial Council Friesland
01 June 2002	Draft Management Plan National Park (Lauwersmeer)	Land use planning, management Lauwers Lake	Management Board Lauwers Lake (ONPL)
10 October 2002	Result public consultation Draft Management plan NPL	Public consultation	ONPL
05 March 2003	Management Plan National Park Lauwers Lake	Land use planning, management Lauwers Lake	ONPL
September 2004	Water Vision - Final Report : Stage 1	Outline of eight possible water management strategies and its effects on the water level	Project group and Technical project group (PG/TG) Lauwers lake vision
March 2005	Draft Water Vision Report: Stage 2	Suggestion to halve the water management strategies. Suggestion to analyse the effects of worse case scenarios, costs, effects on water quality, biodiversity, economical and social interests, water security, side effects outside Lauwers Lake	ONPL
March 2005	Stroomlijnen	Position document of the nature protection organizations for a more natural way of water management.	Cooperating environmental organisations in the North plus Staatbosbeheer
July 2005	Water Vision -Quick Scan subdued tide	Special analyse of the controlled tide water management strategy. The effects on sedimentation, the function of the Lauwers Lake as water reservoir, ecological effects, sustainability	Province Groningen
20 sept 2005	SEA Draft Report Lauwers Lake nature reserve	Exposition of possible water management strategies and its likely effects on the landscape, the history and the culture, the natural environment as well as the soil and the water quality.	Provinces Groningen and Friesland
11 October	Request for the SEA Recommendation	Request for the SEA Recommendation	Provincial Council Groningen Provincial Council Friesland

08 Dec 2005	SEA Recommendation	Recommendation on alternatives, optimalization concretization of the SEA scoping report Report Lauwers Lake	EIA commission (MER)
February 2006	Research Results Water Vision Lauwersmeer.Stage 2. Security, water management, agriculture, recreation and fishing	Special report on the likely effects of the several water management strategies on flood protection, water management, agriculture, recreation and fishing	Project Group Lauwers LakeVision and Technical project group
February 2006	Research Results Water Vision Lauwersmeer. Stage 2. Water quality	Special report on the likely effects of the several water management strategies on the water quality	PG/TG Lauwers LakeVision
February 2006	Research Results Water Vision Lauwersmeer. Stage 2. Costs	Special report on the likely costs of the several water management strategies like cost of investment, energy, compensation and maintenance	PG/TG Lauwers LakeVision
28 February 2006	Research Results Water Vision Lauwersmeer. Stage 2. Summary and Main Report	Main report and summary of the three special reports on the likely effects of the several water management strategies	BOWL
May 2006	3D model Lauwersmeer. Planning a 3D model of salt diffusion and morphology (stage 3)	Special technical report on results of the 3D model Lauwers Lake	National Institute for Coastal and Marine Management
05 July 2006	Provincial spatial plan	General provincial spatial planning including water management strategy	Provincial Council Groningen
20 October 2006	Water Vision Lauwersmeer, additional budgeting (stage 3)	Advanced budgeted analysis of the research Results Water Vision Lauwersmeer.Stage 2. Costs	PG/TG Lauwers LakeVision
24 October 2006	Qualitative analysis of the impact of oozing salt water on agriculture, under a chanced water level in the Lauwers Lake(stage 3)	Examines the likely impact of oozing salt water on the agriculture in the Lauwers Lake area.	Province Groningen
November 2006	Additional management and organisation measures at the National Park Lauwers Lake (stage 3)	Special report on the likely effects of three water management strategies on three green area maintenance strategies in the Lauwers LakePark, focus on the objectives of the management board Lauwersmeer	BOWL
06 November 2006	Application of the vegetation model EMOE in the case of the implementation of the controlled tide strategy in the Lauwers Lake(stage 3)	Special report on the likely effects of the controlled tide method on the vegetation in the Lauwersmeer. Analysis by the means of the EMOE method	National Institute for Coastal and Marine Management (Rijkswaterstaat Rijksinstituut voor Kust en Zee)
13 Nov2006	Research Results Water Vision Stage 3	Main report and summary of the special reports of stage 3	BOWL
13 novr 2006	Official BOWL Position (BOWL Standpunt)	Preliminary decision in favour of the controlled tide water strategy	BOWL
Feb 2007	Council decision Fryslan and Groningen	Decisions of the provincial councils on the water vision alternative	
March 2007	Proposal 'third way'	This 'third way' satisfies the needs of the Frys water quantity wishes and keeps some possibilities for a positive influence of the water management on nature development open	
July 2007	Workshop third way	Operationalisation of the third way.	

In the action arena we see four distinctive phases with slightly different rules (see section 4) and specific outcomes:

1. Search for alternatives;
2. SEA scoping;
3. Assessing the alternatives;
4. Decision making.

We will also use these phases to identify the use of knowledge forms in the action arena.

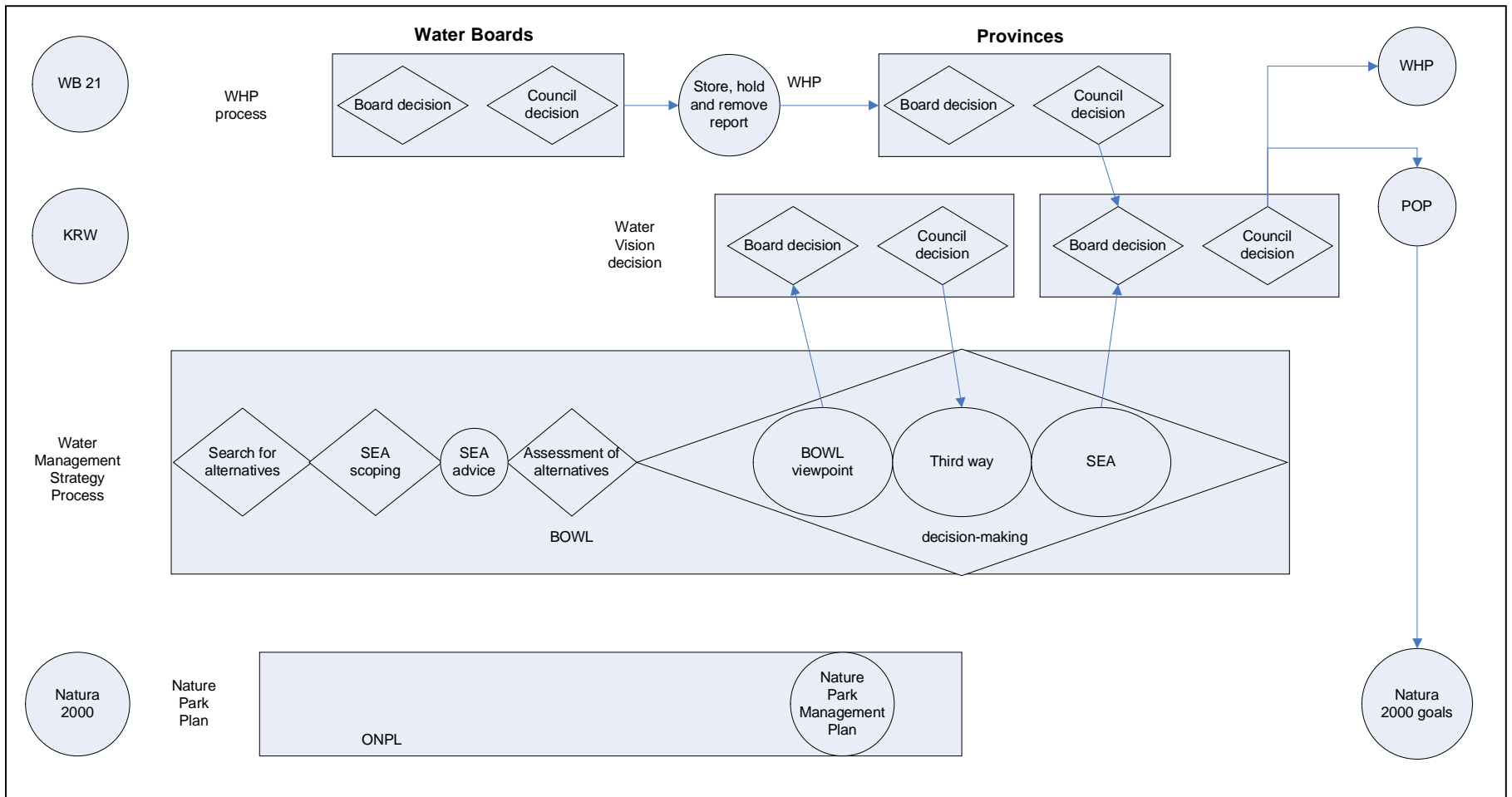
In the first phase the potential alternatives for water management strategies were sought and subsequently narrowed down. In this phase the conditions for a realistic strategy were formulated. Alternatives were also brought on the table from other sides. The Lauwers Lake park council agreed on some form of salt water tide as the best nature alternative for the park. The environment and nature organizations together formulated the 'streamline' alternative.

In the second phase the SEA advice narrowed down the alternatives and added the 'streamline' alternative to the alternatives to be considered.

In the third phase the different alternatives were assessed not only on the basis of ecological and hydrological knowledge but also on the basis of costs. The fourth phase, the decision making, started with the BOWL viewpoint. The water board Fryslân and province of Fryslân took a decision on the water quantity management. Because in the decision phase the Frys council blocked the BOWL alternative and it became clear that national government would not fund this alternative a new compromise had to be worked out. This 'third way' satisfies the needs of the Frys water quantity wishes and keeps some possibilities for a positive influence of the water management on nature development open. In the decision phase the definitive SEA plays a role to objectively present the alternative with information and overcome the political deadlock. The SEA is needed for the decision before it can be part of the WHP, as part of the regional spatial plan for the province of Fryslân, called the Streekplan and the waterpart of the regional environmental plan for the province of Groningen, called Provinciaal Omgevingsplan II. In the following scheme we placed the WHP process and the water management strategy process alongside each other.



Figure 2. WHP and water management strategy process



## ***2.2 Absent Actors***

Most of the actors in the case are collective actors, very rarely individual citizens are involved. Most of the actors are also regional rooted. The ministries have regional agencies in the area and the farmers' organization has a regional branch. Remarkable is the absence of national environmental organizations.

The BOWL process was closed for non government originations (see hereafter). But also local political parties and municipal councils feel left out of the process. They sometimes had to hear developments and decisions via the press.

## ***2.3 Observed Modes of Interaction***

The dominant mode of interaction in this case is negotiated agreements based on arguing and or bargaining. Different governmental bodies have jurisdiction on parts of the same area or from a functional perspective. It is not clear who has the main responsibility. The SEA fore instance has two actors with administrative responsibility. The water management in the area can not be geographical divided. The actors are condemned to each other.

The interaction with national government has some hierarchal aspects. By law provinces, water boards and municipalities have to implement national water and nature goals. In practice national government leaves a lot of responsibility to the regional actors to implement the national goals. An important reason is that the nature and water goals have to be interpreted in the regional context. Secondly there are regional institutions in place to do so. For instance for the Water Framework Directive there is the river basin management process, the Lauwers Lake National Park has it's own governing board.

Apart from regulations there is also the influence through financing. Dutch regional and local authorities depend for a large part of their budget on national government. They could never fund large nature development projects themselves.

As we mentioned before the BOWL was closed for outside actors, like NGO's and municipalities. These actors had indirect influence through the Park management arrangement, which was much more open to non BOWL actors. But they also had influence through lobbying with provincial council and political parties. In Water boards the interests of the agricultural sector are strongly represented in the councils.

To make their point about a more natural water management in Fryslân the Frys nature organizations organized themselves in a network. They did not only produce their own alternative for the area, but also used written and oral hearing possibilities and even excursions for members of provincial states to inform policy makers and politicians about their viewpoints.

National government has clear responsibilities in spatial planning. The agricultural sector managed by means of lobbying to influence the process in spatial planning. Particular in the Christian Democratic Party agriculture is still very influential. As mentioned before during the decision making on the spatial key decision Wadden Sea there was an amendment in national parliament (Motie Atsma and others, October 2006) that made the use of salt water in the area dependent on the support of the agricultural sector.

## *2.4 Discourses*

Above we already mentioned there are two parallel discourses in this case, the water management discourse and the nature discourse.

In principle what should happen with quantitative water management is largely given by national guidelines and standards. All actors work together under a national agreement (WB21). From these standards and calculations a reference situation in 2030 arises. This is the situation that the provinces do everything as agreed in WB21.

But this still leaves the issue of costs. Water boards want to keep costs as low as possible because of their political and electoral support. A specific problem in Fryslân is that the protection against floods was not up to the level that served as a starting point for WB21. Some of predecessors of the water board Fryslân, which is a merge of older water boards, did not invest enough in water infrastructure (dikes, etc.).

So there is an interest from the water quantity actors to try to shift part of these costs on the expenses of the nature alternatives in the Lauwers Lake. The provincial council wants to go further with the protection than strictly necessary, and for them safety against water is an important political issue.

The nature discourse is basically about two issues water level and salt water. The salt water issue is about the question if salt water would in some form have to be allowed in the Lauwers Lake and what this brings for nature. The idea to work with salt water gradients in nature development is not unique for the Lauwers Lake and is also initiated in other parts of country. Like we mentioned before a decentralised unit from the ministry of water management (Rijkswaterstaat Noord) initiated a study into the possibilities to do something with salt water gradients in the north of the country. The Lauwers Lake came already out the study as one important possibility.

A mixed water system of fresh, salt and brackish water creates a unique ecosystem that is nearly lost in the Netherlands.

In the Lauwers Lake area a unique ecosystem developed spontaneously in the last 20-30 years. Without human interventions this system will further develop in the coming years and change its character. The area will be more afforested. Problem is that this does not match with the particular bird species in the area. If we want to keep these particular bird species, than the growing of bushes and trees has to be stopped.

The decision to keep the eco-system as it is basically taken by LNV from a Nature 2000 starting point. This leads to particular nature goals for the area. Also the ministry of water management favors some form of nature restoration because it would be positive for the implementation of the Water Framework directive.

Agriculture is the biggest adversary against any form of tide with salt water, particularly because of possible increase of salt seepage. The recreation sector is more neutral as long as it is well compensated. Nature protection organisations such as SBB, the Friese and Groningse environment federation and the Waddenvereniging are a proponent of subdued tide. The inhabitants of the Lauwers Lake area are in general negative concerning subdued tide.

There is a coalition for the salt water with as main member the council of Groningen, nature organizations and national government. The aim is to realize nature goals. In the coalition against salt water we find the water boards, particular the water board Fryslân, if nature development causes problems with water quantity. Further the private interest in the area. Particular agriculture, but also other interests like recreation if they were not fully compensate. Many citizens of Fryslân are against salt

tide alternatives because of security and water quantity problems. Contrary in general the citizens of Groningen are more positive because of nature interest. The two discourses come together because tide threatens the water quantity solutions.

And the nature goals for the area depend on the water management strategy that is chosen. The third way looks like a compromise. But the farmer organization LTO uses arguments from the nature side to be negative about the 'third way', because the nature would not really profit. In general the discourse became more and more based on emotions and less on facts.

### **3. Identifying Case Specific Governance Arrangements**

#### ***3.1 Governance Modes/ Governance Arrangements***

After the damming off was finished, the Rijksdienst IJsselmeerpolders became responsible for the management of the Lauwers Lake and the land reclamation.

Since the Lauwers Lake National Park was officially installed on the 12<sup>th</sup> of October 2003, as the national Park Lauwers Lake to be established, this was also the start of a new government arrangement. In the new government arrangement the park is supervised by the so-called Council National Park Lauwers Lake (Overlegorgaan Nationaal Park Lauwersmeer) in which all cooperating parties are represented, to name the four adjoining municipalities, the provincial authorities of Groningen and Fryslân, the water boards Fryslân and Noorderzijlvest, engaged NGO's, the Ministry of Defense, and the Ministry of Agriculture, Nature and Food Quality (NPL, 2002). The development objectives of the board are not only guided by the national and the provincial plans and standards but also from the European regulations such as the Water Framework Directive, the Bird Directive and the Habitat Directive.

The council forms the board of the national park. It is responsible for the policies concerning the area, the management, recreation, public relations and education. This means that the council generates plans, monitors the developments in the national park, discusses these developments and coordinates the different parties.

All the organisations involved, like the nature management organisations, municipalities and water boards keep their own powers and responsibilities. This means that the installation as a National Park did not change the juridical status.

The most important task of the council during its start up phase was drawing the park area management plan. This so called Beheer- en Inrichtingplan (BIP) did not replace existing plans or plans in preparation, but was meant to integrate and coordinate as much as possible these spatial and management plans. Further the council divided the financial means for the implementation of projects. Yearly the council has to prepare a report. The council coordinates all activities that are important for the organization and management of the national park. The council meets 3 to 4 times a year on a location in the region.

Apart from the formal members stakeholders the general public has also input in the decision making. All meetings are public and there is a public stand. The agenda and all meeting documents are available a few weeks before on the municipal offices of the four municipalities involved and the provincial offices of the two provinces. The meetings are announced in the local newspapers including the points at the agenda. Stakeholders and the general public have the possibility and right to ask for speaking time at the secretariat of the council.

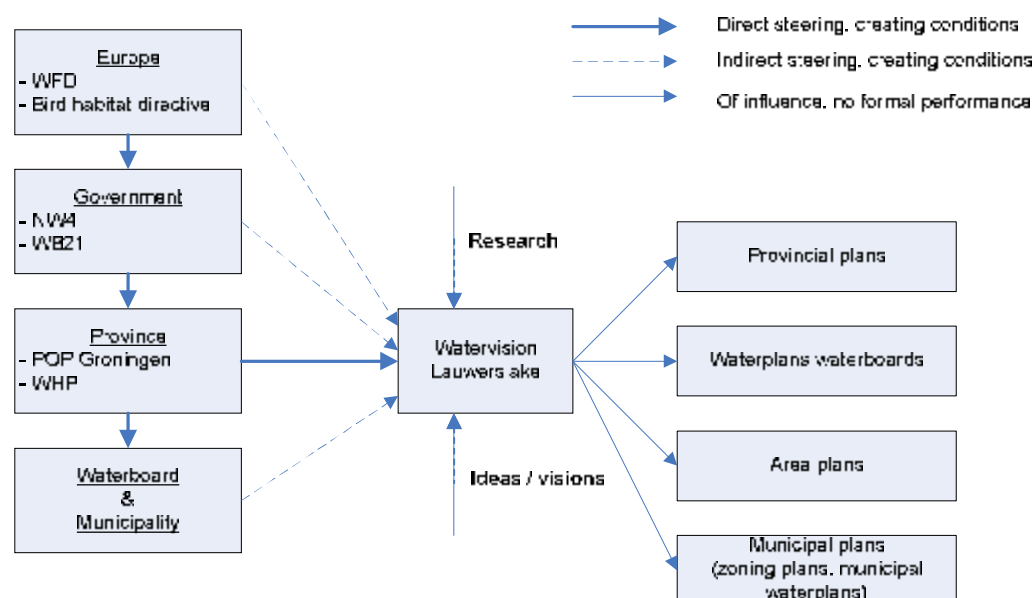
The council is advised by two working groups: a permanent commission for administration and consultation and a working group for public relations, education and recreation. Most decisions are daily management. A strategic decision in the park area management plan, that also contained a wish about water management.

The second new government arrangement in this case is the BOWL. In the Administration Deliberation Water Vision Lauwers Lake (Bestuurlijk Overleg Watervisie Lauwersmeer BOWL) the provinces Groningen and Fryslân, the water boards Fryslân and Noorderzijlvest, and the ministries of Agriculture and Water Management are represented. On a civil servant level also Staatsbosbeheer and the four municipalities from the Lauwers Lake area are involved. The BOWL has a Project group<sup>1</sup> and a Technical Project group<sup>2</sup>. The Administration Deliberation group consists of appointed politicians from the provinces and water boards. In the beginning mainly the civil servant groups met on a regular basis. During the process towards decision making the politicians met more and more frequently.

### *Modes of governance*

*The next figure shows the influence on the water vision Lauwers Lake from the meta governance level and the first order level*

*Figure 3. Governance levels*



<sup>1</sup> G.Miedema, (Prov. Groningen (project leader), L v/d Berg, (Prov. Groningen, secretariat), J. v/d Wijk, (Prov. Groningen), H. Schuurman (Prov. Groningen), H. de Haan (Prov. Friesland) J. J. Buyse (Prov.Friesland), T. Claassen (Water Board Fryslân), A. Kuypers (Water Board Fryslân), H.Paap (Water Board Fryslân))

D.Slagman (Water Board Noorderzijlvest), G.Leene (Water Board Noorderzijlvest)  
S. Vos (Water Board Noorderzijlvest), K. Borrius, (Departement North- Water Management) L. Klamer (Ministry LNV) and H. Hut (Staatsbosbeheer)

<sup>2</sup> H Paap (Water Board Fryslân) and S. Vos (Water Board Noorderzijlvest)

The results from the empirical work show for the regional (first-order) level that the government mode developed more and more from a dominant bargaining network governance mode towards an arguing network mode. Network governance modes are dominant because of the different territorial and functional jurisdictions over the area by regional actors on national (second-order) level of governance.

In the beginning the BOWL can be characterised as *non-hierarchical networks* of autonomous but interdependent public actors trying to reach a number of potential alternative water management strategies on the basis of *bargaining*. *The more these alternatives became politically loaded the more the non-hierarchical network relied on arguing*.

The hierarchical governance mode is dominant on the national (second-order) level of governance. After the water management strategy will be translated into the provincial spatial and environmental plans their will be a hierarchical intervention in society based on democratic political systems and majority decisions in the provincial council. The advice of the water board councils to the provinces is also based on a majority decision.

### **3.2 Rules in use /Institutional Context**

In the Council National Park (ONPL) the position rules are based on the wish to have a broad representation of interest in the national park. The BOWL position rules are based on the fact that the Lauwers Lake area is part of the jurisdiction of a number of government bodies on different government scales and with different sectoral responsibilities that have to cooperate. Entry (*boundary rules*) into the governance arena is largely determined by roles and responsibilities (*position rules*). Actors gain access to the ONPL because they represent one of the private or public interests in the area. Actors that are not formally represented in the ONPL can still gain access in the arena in the public consultation.

In the BOWL only the responsible government bodies are represented. The formal influence of other actors was limited. There was for instance only one hearing of two hours for non BOWL actors during the whole process. The outcomes in of the interactions in the BOWL are negotiated outcomes that have to be led into the representative democracy decision making line (scope rules). The BOWL is only an administrative advisory committee and no governing body with decision-making power. Water boards can take their own position, but still for this type of strategic decisions the power lies in the hand of the councils. The actual decision concerning the future of the water management on the Lauwers Lake is taken by the provincial councils of both provinces.

If we look to the formal *authority rules* national spatial planning decisions and nationally set nature goals should prevail. In practice *aggregation rules* that prescribe how national government could in a binding way influence the outcomes in the BOWL arena will not be used. Also some interests are quite successful in influencing the decisions although they have no formal authority. They make use of lobbying, of personal alliances where elected politicians are also farmers and of influence in certain political parties, like the strong agricultural interest in the Christian Democratic Party.

The BOWL case introduces some very specific pay off rules. All regional partners have an interest that national government carries part of the cost for the new management strategy. Whatever alternative should be chosen, if there are specific

costs only made for the nature goals national government should pay in the eyes of the regional actors.

A starting point is also that the private interest, if they are damaged can and should be bought of. So for instance agriculture would receive damage money if the crops are less due to introducing salt in the area.

### ***3.3 Changes in rules***

In the action arena we see four distinctive phases with slightly different rules. The information rules towards an SEA became formalised because of the European regulation. Also the position rules in relation to the nature development developed during the case

## **4. Identification of the case specific KnowledgeScapes**

Knowledge is recognized as cognitive operations, which select or integrate data and information within specific types of relevancy. Accordingly, knowledge in this context sense always has to do with processes of sense making, with the improvement of capacities to act (speech acts included) and with decision making processes. In order to have an adequate and working concept of knowledge, we distinguish between the following nine specific but partly overlapping and interrelated forms of knowledge: Everyday, expert, product, steering, institutional, economic, local, milieu and reflective knowledge. The combined different knowledge forms, create a case specific KnowledgeScape and can occur in three types of knowledge bundles:

- Bundle 1: scientific/expert/professional knowledge
- Bundle 2: steering/institutional/economic knowledge
- Bundle 3 everyday/milieu/local knowledge

### ***4.1 Dominant Knowledge Forms: Content/claims of Knowledge Forms***

In order to determine the case specific knowledge forms and bundles in the 'Water Vision' process, the process will be separated in four analytical stages:

1. Search for alternatives;
2. SEA scoping;
3. Assessing the alternatives;
4. Decision making

The SEA for the plans and project is part of the entire process and can be recognized as Steering Knowledge which influenced the course of the process.

Figure 1 shows the four stages, the main actors of the 'Water Vision' and the different knowledge forms.

#### ***Search for alternatives***

The 'Water Vision' process started with the identification of the development targets and demands of the concerned actors in the Lauwers Lake nature reserve. From the beginning the process was dominated by the Institutional, Steering and Expert Knowledge. The Institutional Knowledge such as the European Bird Directive and Water Framework Directive, the national laws and policies, as well as provincial policies and authorities, determined the regulating framework. The Expert

Knowledge, mainly represented through ecological and model based hydrological studies identified the developments and needs in the Lauwers Lake. Additionally, local scientists and experts developed several water management scenarios. The Local and Everyday Knowledge was largely gathered through the consultation board of the Lauwers Lake nature reserve and passed through its management to the governance arena BOWL.

The BOWL, contains the provinces of Groningen and Fryslân which initiated the 'Water Vision'. The Steering Knowledge of the BOWL led the process. The water boards of Groningen and Fryslân as well as the Lauwers Lake reserve management board are the main responsible authorities, which have to carry out the management plan. Additionally the Ministry of Agriculture, Nature & Food Quality represents the national environmental interest. Regional interest groups and environmental groups were largely excluded from the governance arena BOWL, as they were only informed about the plans in public hearings. The responsible authorities used their Steering Knowledge, determined the information rules according to the boundary rules. Hence the Local and Everyday Knowledge (bundle 3) was present but barely found its entry to the governance arena BOWL. The Reflective Knowledge was relevant as so far as the inventory of the demands increased the consciousness of the concerned actors.

In the Lauwers Lake case the Expert Knowledge is regarded as objective and necessary to clarify and understand the ecological and hydrological processes in the Lauwers Lake area. Research institutes (knowledge brokers) such as Alterra, HKW and IWACO analysed the area and identified the management needs according to the Institutional Knowledge (IWACO, 2001). Additionally, the intern experts of the water board and the nature reserve board provided the Local and Specific Knowledge to the research institutes. As a result, the Scientific, Expert and Professional Knowledge (bundle 1) dominated the identification of the demands and the developments in the Lauwers Lake. Together with the Institutional and Steering Knowledge, the Expert Knowledge legitimizes the water management scenarios and objectives. However, the Institutional and the Steering Knowledge was only dominant as a single knowledge forms because the Economical Knowledge was not relevant at this first stage. Therefore the knowledge bundle 2 was not complete. The minor Local and Everyday Knowledge (bundle 3) was important to determine the demands of the local residents.

#### *SEA scoping*

The first stage of the 'Water Vision' process was characterized by the knowledge bundles 1 and 2. This ascendancy also continued in the second stage of the process. The SEA scoping report for project and plans (Notie Reikwijdte en Detailniveau tbv SMB Watervisie Lauwersmeer) is based on the ecological and hydrological studies of the previous stage. It prescribes four water management possibilities, the consolidation of the water level, a high level freshwater system, a high level saltwater system and a subdued tide. Subsequently, it offers several strategies to execute the management (Arcadis, 2005). The strategies include mainly the Expert Knowledge of the management boards and the Professional Knowledge of the research institutes.

The SEA scoping report for projects and plans, also shows that the boundary rules of the 'Water Vision' largely exclude the environmental and interest groups. It mentions no alternative water management views which also means that the use of Everyday,



Milieu and Local Knowledge is quite limited. Accordingly, the NCEA advised the initiators of the SEA, the Provinces of Groningen and Fryslân, to include alternative water management strategies such as Stroomlijnen (Streamlines), published by engaged environmental and interest groups. Furthermore the NCEA asked the initiators to optimize the management strategies by emphasizing the differences and clarifying the effects on the environment (MER, 2005). The commission also emphasized the function of the SEA as a tool for the public and policy makers. These advices of the NCEA can be understood as both, Steering Knowledge and Reflective Knowledge as it forced the initiators to open the governance arena and to use different and new knowledge. The NCEA has the Institutional Knowledge about the SEA requirements and the obligation to write a SEA is also a kind of Steering Knowledge. The SEA requirements forced the initiators to refer to relevant European and National environmental law and policies. Hence the initiators were asked to place the entire 'Water Vision' process in a wider context. Apart from that, by emphasizing the function of the SEA as a tool for the public, the NCEA might open the action arena for Everyday and Local Knowledge.

#### *Assessing the alternatives*

Compared to the previous stages, the third stage was clearly characterized by the dominance of knowledge bundle 1. The influence of the Institutional and Steering knowledge decreased. In order to optimize the alternatives, the knowledge broker HKV, carried out deep hydrologic effect analysis about the subdued tide scenario (HKV, 2005). The study is based on the expertise of the water boards and intern experts. Additionally the province of Groningen ordered Arcadis and HKV to accomplish a detailed cost analysis of the different management strategies, which can be classified as Economical Knowledge. Like the HKV study, the cost analysis is based on the knowledge of the water boards and primarily takes the costs of building and maintaining the water pumping stations into account (Arcadis, 2006b). Hence it largely neglects the environmental costs and the costs for the agricultural sector. Another effect-analysis of Arcadis in cooperation with the experts of the BOWL project group, examines the effects on the water security, fishing industry as well as the agricultural and recreational sector in the Lauwers Lake (Arcadis, 2006a). Finally the BOWL demanded a hydrologic analysis of the several water management strategies and its effects on the Biodiversity in the Lauwers Lake as well as on the adjoining farming ground (A&W, 2006). Also this report mainly uses its own knowledge, the expertise of the Lauwers Lake reserve management and the knowledge of the water board experts.

Although the expertise of the Lauwers Lake reserve management board and water boards might be based on Local and Everyday Knowledge, it is generated through the own intern experts. Hence the studies more or less lack the Local and Everyday Knowledge.

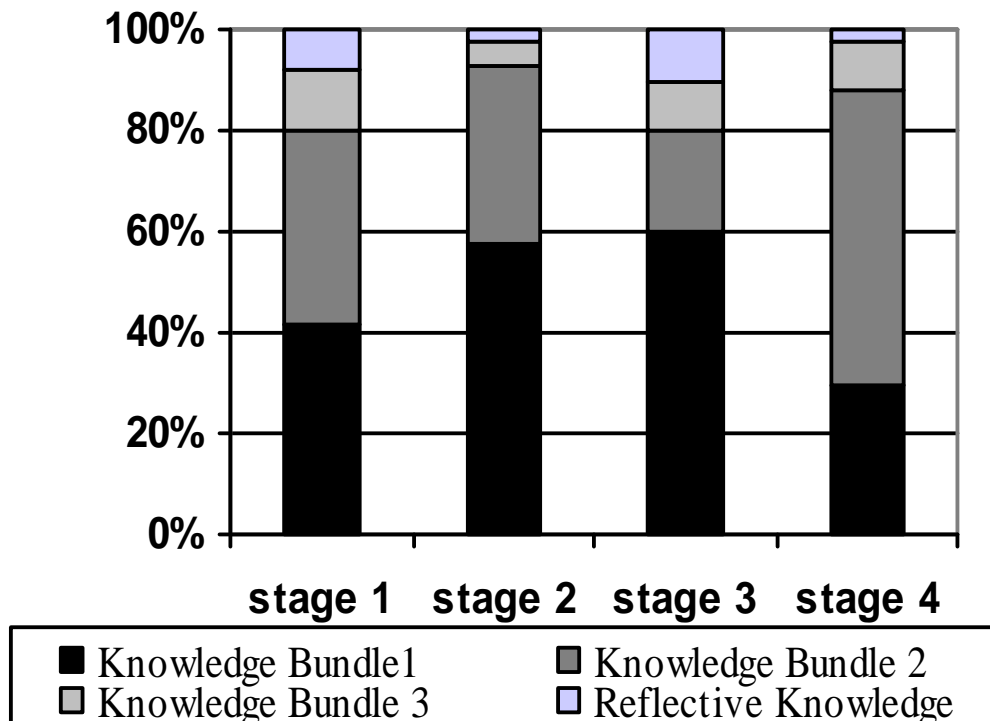
#### *Decision making*

Until now the process of the 'Water Vision' management plan and the final SEA report is unfinished. The process is characterized by disagreements in the BOWL and a lacuna of support for the decided alternative within the civil society. While the Province of Groningen decided in favour of the subdued tide variant, which is also supported by the environmental groups, the Province of Fryslân together with the agricultural and recreational sectors opposes the salt water influx.

The Economic Knowledge plays an important role in the decision making process and the debate on the salt water influx. Since the economical, ecological and agricultural costs are unclear, the BOWL is still uncertain about the funding of the project.

On the one hand, the Lauwers Lake nature reserve has national and international ecological importance. Hence, the BOWL agreed that the operation of the subdued tide variant is only possible with a central governmental funding (BOWL, 2006). On the other hand the central government is not willing to pay for costs which should be paid for by the provincial governments and the water boards. So divergent Economical Knowledge also blocks the decision making process.

Figure 4. The Process stages and its dominant Knowledge Bundles



#### 4.2 Knowledge Holders

For the identification of the knowledge holders it is important to realize that almost every single organization, mentioned in the Lauwers Lake case as an actor, is an action arena on its own. For example the NCEA contains several steering members and experts who provide the case specific knowledge. However in this case, because of analytical reasons it makes sense to focus on the BOWL action arena.

Due to the complexity of the Lauwers Lake area, the case is highly characterized by Expert and Professional Knowledge. The future management strategy of the park should not only include the maintenance of the current status quo but should support an improvement of the area. In other words, normative images about the use and the landscape of the nature reserve also determine the future management strategy. Hence

the Expert Knowledge Holders in this case mainly are ecologists, biologists, hydrologists and engineers. These Knowledge Holders influenced the BOWL, as they are representatives of the Provincial Councils of Groningen, the Ministry of LNV and the water boards. In addition to these knowledge holders who belong to an actor, there are experts who join an actor ad hoc. For example in order to guarantee a certain quality standard of the advice, the NCEA includes an independent ecologist who is familiar with the Lauwers Lake area and is able to analyse and evaluate the submitted SEA report (MER, 2005).

Apart from the holder of the Expert Knowledge, Professional and Economical Knowledge is held by actors that are exclusively responsible for a special field and that therefore are highly specialized such as the Lauwers Lake reserve management board and the water boards. These actors have built up a long expertise in their working field through empirical field research and Everyday Knowledge, making them a professional.

The Institutional Knowledge is mainly held by the BOWL and NCEA. They know the legal framework which set the boundaries for the case. They also hold the Steering Knowledge since they are decisive for the process and the outcome.

Other important knowledge holders in this case are the knowledge brokers such as Arcadis, Iwaco, HKW and A&W. They summarized, collected, rewrote and filtered the available knowledge and composed reports. These reports were used by almost all actors of the Lauwers Lake 'Water Vision' process. For example Arcadis wrote the SEA scoping report on behalf of the initiators; the province of Groningen and Fryslân. A&W wrote the effect studies on behalf of the BOWL. These effect studies are also used by the environmental groups and the agricultural and recreational sectors which are mainly excluded from the action arena to substantiate their attitudes and demands.

The Local and Everyday Knowledge is mainly held by residents, farmers, entrepreneurs and environmentalists. This knowledge is based on the daily experience and a certain way of doing and not necessarily verified by empirical knowledge. In contrast, the Steering Knowledge is mainly held by authorities and officials.

#### ***4.3 Excluded /Silent Knowledge***

The indirect Steering Knowledge of excluded municipal authorities is a kind of Silent Knowledge. According to the boundary rules access to the BOWL is limited and very selective. As a result, not only the non-governmental organizations have no direct access to the action arena but neither do the small adjacent municipal authorities around the Lauwers Lake nature reserve. These municipal authorities often use their personal contacts to members of the provincial parliament to indirectly enter the action arena. Besides they have a direct influence on the Lauwers Lake nature reserve management board which can profit from their Steering Knowledge. Another kind of Silent Knowledge is the personal contacts of lobbyists with members of the provincial parliaments and the water boards. Thereby they can receive unpublished information and relay their Local Knowledge to parliament members.

Furthermore the knowledge about the public support can also be recognized as a sort of Silent Steering Knowledge which indirectly influences the decision making process. For example, the lack of public support for the salt water influx in the Lauwers Lake, urged the Province of Fryslân to oppose the subdued tide variant. This kind of Silent Knowledge has a crucial influence on the progress of the process as certain groups indirectly force individual parliamentary members to block or to refuse decisions.

#### ***4.4 Relevance of Reflective Knowledge***

At all four stages of the 'Water Vision', Reflective Knowledge were relevant for the whole course of the process. Some actors used the different Knowledge forms to adjust their state of knowledge and opinions. Others however used the knowledge subjectively and selectively. They adapted the information according to the relevance, for either supporting or opposing particular opinions and positions.

At the first stage, the ecological reports offered several ideal types of the nature and the needed measures. Additionally, the demands of the engaged actors were listed. This helped the actors to understand the problems and the complexity of the Lauwers Lake nature reserve. For example, the water board of Groningen was initially mainly focused on the water management without taking into account the effects on the ecosystems. After the first stage, the actor realized that the water board might have to match their policies according to the special requirements of the area<sup>3</sup>. In other words through the exchange of the Expert and the Local Knowledge combined with the Steering Knowledge, actors became more willing to negotiate.

At the second stage, the advice of the NCEA stated that for a proper SEA report more clearness of the several water management effects on the nature is needed, to make the policies understandable for all concerned actors and the public. The Steering Knowledge of the NCEA forced the actors to consider all possible effects of their policies. Hence, the SEA report itself was instrumental to stimulate Reflective Knowledge in the 'Water Vision' process.

The hydro-ecological and economical effect reports, published after the NCEA advice at the third stage, were used by both the supporters and the opponents of the saltwater influx. On the one hand, ecologists who had a bias towards the original state of the Lauwers Lake area considered the salt water influx as a positive impact for the environment although some freshwater species will be replaced by saltwater species. This kind of Expert Knowledge confirmed the ideas of the Ministry of LNV, the Lauwers Lake management board and the environmentalists of the Environmental Federation. Backed by the support for the salt influx, the Province of Groningen conceived the subdued tide variant as the 'right' management variant. On the other hand, ecologists who want to preserve the current status quo of the nature reserve argue that the salt water influx will primarily displace the freshwater species. Combined with the Ecological Knowledge, this Expert Knowledge was mainly used by the agricultural and recreational sector to argue against the salt water influx.

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<sup>3</sup> Interview Water board, Noorderzijlvest P.Berling

At the final decision making stage, the effect of the selectively used Knowledge forms becomes clear. For example the agricultural sector, holder of Everyday Knowledge ignores and rejects some Expert Knowledge. They still use the main argument against the saltwater influx in the Lauwers Lake that seeping saltwater will heavily damage the adjacent farming grounds although the model based effect studies cannot confirm this fear<sup>4</sup>. Emotions are linked to the Everyday and Expert Knowledge. Compared to the Everyday Knowledge which might be based on old traditions, the Expert Knowledge is probably achieved through fewer field studies. In this case, this makes the Everyday Knowledge more trustable than the Expert Knowledge. In the end, the lack of the Reflective Knowledge hampered the entire decision making process.

## **5. Identification of Interfaces/Interaction between Knowledge and Governance Arrangements**

This part of the chapter will emphasize the relationship between the knowledge forms and bundles as described in section 4 and the several governance modes, identified in section 3. Here the term governance refers to the steering mechanisms and capacities as well as to the changes in institutional arrangements. Furthermore it will be identified if certain governance arrangements encourage, facilitate, obstruct or hinder the development of the specific knowledge forms and bundles. In this context knowledge is considered as a sort of stock which must be accumulated, maintained, activated and distributed for certain political purposes.

The analysis of the four stages of the ‘Water Vision’ process showed different dominating Knowledge Forms and Governance Modes. The Steering Knowledge, such as the Natura 2000 guidelines, the SEA Directive, the advice of the Water Commission WB21, the national water and environment policies created the institutional framework for the BOWL and the Lauwers Lake management board. The governance mode of the relationship between the BOWL and the Lauwers Lake management board, and the Steering Knowledge Holder, such as the European Commission and the National Government, is hierarchical.

The governance mode of the BOWL changed during the ‘Water Vision’ process. In the first stage, during the search for the water management alternatives, the actors of the BOWL cooperated in a bargaining network. Primarily the accumulation of knowledge about the characteristics of the Lauwers Lake environment, the demands and needs of the concerned actors and public as well as the water and nature management possibilities were important. The water boards of Groningen and Fryslân provided the Professional and Expert Knowledge as well as the Institutional and the Steering Knowledge in form of the water management objectives. The Ministry of LNV, which also is member of the Lauwers Lake management board and holder of the Expert, Institutional and the Steering Knowledge, mainly presented the national environmental objectives. The Provinces of Groningen and Fryslân, holders of the Institutional and the Steering Knowledge manifested the Provincial environmental and water management objectives. In spite of the presence of the Steering Knowledge, the

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<sup>4</sup> Interview LTO North, J. Boersma

actors of the BOWL showed the willingness to solve the problems for mutual satisfaction.

At the subsequent stages of the 'Water Vision' process, the governance mode of the BOWL changed from a bargaining to an arguing network. The hydrological and economical effect studies showed that a small amount or a short-term saltwater influx does not have the expected impact on the environment. Hence a bigger amount or a long-term saltwater influx is needed to reach the objectives of the Lauwers Lake management board. The bigger amount of water challenges the security and the water management of the water boards. The long-term saltwater influx triggers the fear of damages to the farming grounds within the agricultural sector. Furthermore the uncertainty about the costs and funding intensified the discussion. In other words the specific Economical Knowledge combined with a certain Expert Knowledge and the several Steering Knowledge holders changed the BOWL governance mode.

The governance mode outside the BOWL was dominated by a hierarchical relationship. The Expert and Professional Knowledge of the BOWL were used to inform the non-governmental groups and the public. By comparison, the Lauwers Lake management board was on an arguing network from the beginning, in which the represented small adjacent municipalities and interest groups tried to pursue their interests. This network was mainly dominated by the Local, Everyday and Expert Knowledge.

### ***5.1 Synergies/ Contradictions between Governance Arrangements and Knowledge Forms***

Depending on the Knowledge Forms and on the three governance modes, Hierarchy, Bargaining and Arguing, the relationship between them can either facilitate or obstruct other Knowledge Forms and Governance Modes. In the 'Water Vision' case, the Institutional and the Steering Knowledge of the NCEA and its hierarchical action orientation forced the initiators of the SEA report to clarify the effects of their potential policies on the environment in general and more specifically on the protected birds which are subject of the European Bird Directive. This drove the actors to use Expert Knowledge. Moreover the SEA report is also an information source for the public and therefore the Hierarchical Governance Mode encourages Reflective Knowledge. However, the NCEA also encourages the actors to develop a certain bias, directed towards the European Natura 2000 guidelines. Hence the Hierarchical Governance Mode not only promotes the Expert Knowledge, but it might also obstruct a broader Expert Knowledge.

The change of governance mode in the BOWL showed that the Expert and Economical Knowledge in a Bargaining Network can be used for mutual benefits and also to argue in favour of the own interests. While in the Hierarchical Governance Mode, arguing is only possible to a certain extent, in a Network the Governance Mode can change from Bargaining to Arguing. Furthermore contradictory or incoherent Expert and Economical Knowledge can encourage more Knowledge but also hamper the process, as studies are time and resource consuming. Furthermore, the course of the 'Water Vision' process showed that the dominance of Steering Knowledge can disrupt the Bargaining Network. For example, at a certain point, the Province of

Groningen refused to accept the BOWL position in favour of the subdued tide variant and instead proposed a new water management variant, the Third Way.

### ***5.2 Relationship between Modes of Interaction and Knowledge Forms***

Due to the complexity of the Lauwers Lake area, the case is characterized by the dominance of the Expert, the Professional, the Institutional and the Steering Knowledge. As mentioned, the dominant mode of interaction is arguing and bargaining. It is not clear if a single knowledge form or bundle can influence the governance mode. However the combination of the different Knowledge Forms or bundles can affect the governance mode. On the one hand the analysis of the first stage of this case showed that bargaining can increase the Expert and Professional Knowledge because all actors would like to reach the best possible result and want to substantiate their position. On the other hand, the Expert and Professional Knowledge combined with Steering Knowledge can stimulate arguing as show at the final stage of the process. Apart from that the Economical Knowledge combined with Steering Knowledge and Expert Knowledge can stimulate arguing.

### ***5.3 Relationship between Governance Arrangements, Knowledge Forms and Learning processes***

As already indicated the SEA is an information tool and encourages learning and Reflective Knowledge. Furthermore, previous sections showed that the dominance of Expert and Professional Knowledge does not mean that actors will conceive this knowledge as relevant since actors are very selective. The analysis of the 'Water Vision' process shows that actors probably showed the greatest willingness to learn from each other in the Bargaining Network, knowing that this will lead to a mutual advantage. For example, this became clear at the beginning of the 'Water Vision' process. Actors were brought together for a knowledge exchange and better understanding on a day excursion. In contrast, in the BOWL's Arguing Network, actors were focused on their own objectives and even refused to talk to each other. Hence, the SEA report is also conceived as a sort of remedy for the process as it requires objectivity and clearness.

## **6. Identifying 'Governance for Sustainability'**

### ***6.1 Assessing Sustainable Development in the Selected Case***

In our assessment of sustainability we conceptualize it as an issue of *policy integration*. Substantively, sustainability has to do with three major concerns: environmental, economic and social. Moreover it implies a concern for long term policy effects. The notion of sustainability is conceptualized as a form of inter-sectoral and inter-temporal *integration*. We asses here using three criteria for integration of policies: comprehensiveness, aggregation and consistency.

#### ***Comprehensiveness***

The criterion of *comprehensiveness* implies that sectoral policies programs should reflect environmental, economic and social concerns both sectoral and inter-temporal. Although the water vision is not ready yet, it is clear that in all policy documents there

is a clear qualitative and quantitative assessment of economic, social and environmental concerns.

Both for the water quantity goals and the nature goals the goals are by definition focused on the long term. The water vision is not finished yet, but the whole idea of the water vision is looking for a comprehensive and integrated approach in the search for the best alternative water management strategy in the long term. Changes in water infrastructure are deemed necessary in 2030. Also the impact of the change in water management for nature development has a clear long term perspective.

#### *Aggregation*

Aggregation is high because the process has a strong focus on an ex-ante evaluation of the economic, social and environmental impacts of the project. The process tries to combine water quantity and nature goals and its likely social and economic impacts, although in the beginning of the process the ex-ante evaluation of hydrological and ecological was dominant. The more concrete the alternatives became, the more important became the study of the social and economic impacts.

#### *Consistency of policy program*

Due to the number of different interests in the area economic and social, economic and ecological and social and ecological objectives and the instruments for achieving have not been in accord with each other. It is difficult to come with a win-win solution that would benefit all interest.

The resulting level of sustainability is intermediate. Comprehensiveness and aggregation is high, but consistence is rather low (due to conflicting nature, agriculture and water safety interest).

### ***6.2 Assessing the Legitimacy of Policy-Making in the Selected Case***

The BOWL is a very closed process. There was only one hearing of two hours preceding the BOWL-advice and this only at the latest moment. Stakeholders and municipalities felt left out of the decision making process. Stakeholders used their lobbying influence through provincial council hearings and political affiliations to influence the decision. The farmer organizations were successful in this in the province of Fryslân. But this set the interest of the nature organizations aside. Although the process is not completely finished output legitimacy will be seen as moderate because it comes from the provincial councils as representative democratic institutions, but citizens will always feel the outcome as a compromise between the councils in Fryslân and Groningen. Citizens of the more urban Groningen, particular the city of Groningen who are less affected by the economic consequences of salt water favour more the nature development alternatives. The citizens of the more rural Fryslân favour more the solutions that contribute to water safety without compromising the agricultural interest.

Legitimacy is low, particular the input-legitimacy is low and the throughput-legitimacy for the first part of the case. Output legitimacy reaches only intermediate levels.



### ***6.3 Synergies/Contradictions between Governance Arrangements and Knowledge Forms on the one side and Sustainability and Legitimate Policy-Making on the other side***

Because the Lauwerslake area is part of jurisdiction of four municipalities, two provinces and two water boards new modes of governance had to be created. These new government arrangements function in the shadow of the hierarchy of national government. To attain national and European goals national government could in theory overrule provincial government and decide on the future of the Lauwers lake area. The provinces, water boards and municipalities would be left in their legislative role as co-implementers. This hierarchy is not only bound by legislation but also by financial strings. Certain options can only be realised with strong financial support of the national administration.

If national government would have pushed the nature agenda opting for a strong subdued tide alternative the output legitimacy would have been seen as very low by the local stakeholders.

From the perspective of sustainability the inventory of the demand of the different interest in the government arrangement was a learning process for actors that made them see more than their own water, nature or economic interests. The SEA process itself made clear that the water management effects on the nature is needed, to make the policies understandable for all concerned actors and the public. In principle the so-called most environmentally friendly alternative is not mandatory in a Dutch SEA-process. But the adding of the streamline alternative created some form of such an alternative.

What influences output legitimacy is a kind of what some respondents called emotional information lock. Whatever the other actors would come up with this information would not be accepted by adversaries of certain alternatives. This would particular go for the effect of salt water on agriculture. But also the risks of flooding is something were stakeholders and citizens react emotional, and does not make them open for objective information about risks and mechanism

The provinces worked time after time again with the same consultancies, which may not have add to the objectivity of the information of the stakeholders.

What threatened output legitimacy was at the one hand that particular actors were excluded of the decision making process, like municipalities. But because of lobbying activities and closed circuits between certain interest, especially agricultural and less the recreational sector, and some political parties. Agricultural interest are also overrepresented in the waterboard councils. For politicians the steering about what an important part of the electorate thinks is very important.

## References

- A&W. (2006). Onderzoeksresultaten voor de Watervisie Lauwersmeer: Fase 3. Groningen
- Arcadis. (2005). Notie rijkwijdte en detailniveau TBV SMB watervisie Lauwersmeer(No. 2005110202/CE5/003/000570).
- Arcadis. (2003). Beheer-en inrichtingsplan Nationaal park Lauwersmeer (No. 110202/NA3/1U8/000466/001).
- Arcadis. (2004). Watervisie Lauwersmeer. Eindrapport fase 1 (No. PR 613. 10).
- Arcadis. (2005). Notie rijkwijdte en detailniveau TBV SMB watervisie Lauwersmeer (No. 2005110202/CE5/003/000570
- Arcadis. (2006a). Onderzoeksresultaten voor de Watervisie Lauwersmeer : fase 2: samenvatting en hoofdrapport.
- Arcadis. (2006b). Onderzoeksresultaten voor de Watervisie Lauwersmeer: Fase 2. Kostenramingen (No. 110202.000570).
- Coenen, F.H.J.M., Les nouvelles modalités de la decision publique dans le domaine de l'environnement et la place de l'evaluation environnementale des plan et programmes, L'expérience aux Pays-Bas, Aménagement et nature, p. 27-35, No134,Septembre, 1999
- Ente, P. J., & de Glopper, R. J. (1985). Vijftien jaar afgesloten Lauwerszee : resultaten van onderzoek en ervaringen met inrichting en beheer. Lelystad: Rijksdienst voor de IJsselmeerpolders
- European Commission- Documents <http://europa.eu.int/comm/environment/eia/sea-support.htm#int>
- European Commission (2001), European Parliament and Council of the European Union Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”. Available online: [http://europa.eu.int/comm/environment/eia/full-legaltext/0142\\_en.pdf](http://europa.eu.int/comm/environment/eia/full-legaltext/0142_en.pdf)
- HKV. (2005). Watervisie Lauwersmeer. Quick Scan Gedempt getij (No. PR958).
- ICON Consultants (2001), Country Report, SEA and Integration of the Environment into Strategic Decision-Making, Volume 2 May 2001 Available online: [http://ec.europa.eu/environment/eia/sea-studies-and-reports/sea\\_integration\\_xsum.pdf](http://ec.europa.eu/environment/eia/sea-studies-and-reports/sea_integration_xsum.pdf)
- IWACO. (2001). Natuurvriendelijke waterhuishouding Lauwersmeer : concept-rapport (No. 25894). Groningen IWACO, Vestiging Noord.
- MER. (2005). Watervisie Lauwersmeer: Advies over de reikwijdte en het detailniveau van de Strategische Milieubeoordeling (SMB) (No. 1660-53): Commissie voor de Milieueffectrapportage
- NCEA (2004), Netherlands Commission for Environmental Assessment. Website Information about national activities available online: <http://www.eia.nl/eia/sitemap.htm>
- Netherlands Commission for Environmental Assessment <http://www.eia.nl> (information about work in the Netherlands)
- Netherlands Commission for Environmental Assessment <http://www.eia.nl> (information about work in the Netherlands) NCEA's database for SEA <http://www.eia.nl/ncea/database/search.htm>
- NPL. (2002). Nationaal Park Lauwersmeer: Nationaal Park Lauwersmeer

- ProvGroningen. (2000). Provinciaal Omgevingsplan (POP) Koersen op karakter.  
Groningen
- PSF. (2006). Streekplan Fryslân 2007: Om de kwaliteit fan de romte: Provinciale  
Staten van Fryslân
- VROM. (2006a). Milieueffectrapportage van plannen (planmer) (No. 6161):  
Ministerie van VROM.
- VROM. (2006b). Nota Ruimte
- VROM. (2006c). Strategische milieubeoordeling. Derde Nota Waddenzee.

## Attachments

**Table 1 Actors**

<b>Organization</b>	<b>Actor /name</b>	<b>Activity</b>	<b>Actor Status</b>	<b>Affiliation</b>	<b>Holder Concept/ Attributes</b>	<b>Documents</b>
<b>European Commission</b>		Protection biodiversity, Conservation restoration and maintenance of natural habitats  Control of surface and groundwater pollution  Research	International Collective	Administration Supranational Inter- governmental	Right holder Knowledge holder  Financial support  Knowledge sharing Networking / cooperation  Monitoring	Habitats Directive (92/43/EEC) Natura 2000  Birds Directive (79/409/EEC)  EU Water Framework Directive (2000/60/EC)

<b>Ramsar</b>		International standards for a wise use and conservation of wet lands	International Collective	Inter-governmental	Knowledge holder Status holder  Knowledge sharing Networking/ cooperation  Financial support	Ramsar Convention
<b>Dutch central Government</b>		General Legal regulations Management / guarantee public goods	National Collective	Administration Governmental	Right holder Knowledge holder Status holder Spatial holder  Guidance Finance Monitoring	Nature Conservation Act (Natuurbeschermingswet 1998)  National Water Management Agreement (Nationaal bestuursakkord water)  Spatial Planning Act (1965)  Stade Declaration (1997)

Ministry of Agriculture, Nature & Food Quality (LNV)		<p>General spatial planning 2000-2020</p> <p>General strategy for the management of nature, forests, landscape and biodiversity 2000-2010</p>	National Collective	Administration Governmental	<p>Right holder Knowledge holder Status holder Spatial holder</p> <p>Guidance Finance Monitoring</p>	<p>Fifth legal notice spatial planning 2000-2020 (Vijfde Nota over de Ruimtelijke Ordening 2000/2020)</p> <p>Third legal notice wet lands (Derde Nota Waddezee)</p> <p>Structure plan green space (Structuurschema Groene Ruimte/ Ecologische hoofdstructuur)</p>
Ministry of Defence		Defence of national and allied territory Military training area Marnewaard - Lauwersmeer	National Collective	Administration Governmental	<p>Right holder Status holder Spatial holder</p>	<p>Structure plan Military areas (Sturctuurschema Militaire Terreinen)</p>

<p>Ministry of Housing, Spatial Planning and the Environment (VROM)</p>		<p>Legal regulation of national spatial planning</p> <p>General spatial planning 2000-2020</p> <p>General strategy for the management of nature, forests, landscape and biodiversity 2000-2010</p>	<p>National Collective</p>	<p>Administration Governmental</p>	<p>Right holder Knowledge holder Status holder Spatial holder</p> <p>Guidance Finance Monitoring</p>	<p>Spatial Planning Act (Wet op de Ruimtelijke Ordening)</p>
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<p>Government / Ministry of Transport, Public Works and Water Management (V&amp;W)</p>		<p>General spatial planning 2000-2020 General strategy for the management of nature, forests, landscape and biodiversity 2000-2010 National water management General strategy on integral water management 1998-2006</p>	<p>National Collective</p>	<p>Administration Governmental</p>	<p>Right holder Knowledge holder Status holder Spatial holder  Guidance Finance Monitoring</p>	<p>Fifth legal notice spatial planning 2000-2020 (Vijfde Nota over de Ruimtelijke Ordering 2000/2020)  Structure plan green space (Structuurschema Groene Ruimte/ Ecologische hoofdstructuur)  Third legal notice wet lands (Derde Nota Waddezee)  Third legal notice coast (Derde Kustnota)  Fourth legal notice water supplier (Vierde Nota Waterhuishouding)  National Water Management Agreement (Nationaal bestuursakkord water) North Water agreement (Waterakkord 2004)</p>
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Department of Public Works and Water management Department North (Rijks-waterstaat Directie Noord Nederland)		Water management Water supply/ sewage disposal Flood protection Waterway maintenance	Provincial Individual	Administration Governmental	Right holder Knowledge holder Status holder Spatial holder  Guidance Finance Monitoring	
National Institute for Coastal and Marine Management (RWS) (Institute of the V&W)		Knowledge supply Advise Research/ management centre	National Collective	Administration Governmental	Knowledge holder	
Ministry of Economic Affairs		General spatial planning 2000-2020	National Collective	Administration Governmental	Right holder Status holder Spatial holder  Guidance Finance	Fifth legal notice spatial planning 2000-2020 (Vijfde Nota over de Ruimtelijke Ordening 2000/2020)

<b>Provincial Council Groningen</b>		Provinciaal spatial planning  Environment protection, Water management Flood protection	Provincial Collective	Administration Governmental	Right holder Knowledge holder Status holder Spatial holder  Guidance Finance Monitoring	Provincial area plan POP 1 & 2  Water Vision
		Water management Water supply/ sewage disposal Waterway maintenance	Provinciaal Individual	Economy / Administration Public Enterprise	Right holder Stake holder Finance Monitoring	North Water agreement (Waterakkord 2004)
<b>Provincial Council Friesland</b>		Provinciaal spatial planning  Environment protection, Water management Flood protection	Provincial Collective	Administration Governmental	Right holder Knowledge holder Status holder Spatial holder  Guidance Finance Monitoring	Provincial area plans (Streekplannen 1&2)  Water Vision

Water Board Friesland weterskip Fryslan		Water management Water supply/ sewage disposal  Waterway maintenance	Provinciaal Individual	Economy / Administration Public Enterprise	Right holder Stake holder  Finance Monitoring	North Water agreement (Waterakkord 2004)
<b>Association of Water Boards</b>		Interest promotion	National, International Collective	Economy / Administration Public Enterprise	Status holder  Knowledge sharing Networking/ cooperation  Legal support	National Water Management Agreement 2003 (Nationaal bestuursakkord water)
<b>Inter-provincial Consultation (Inter- provinciaal Overleg (IPO))</b>		Interest promotion	National Collective	Administration Governmental	Status holder Right holder  Knowledge sharing Networking/ cooperation	National Water Management Agreement (Nationaal bestuursakkord water)
<b>Association of Netherlands Municipalities</b>		Interest promoting	National Collective	Administration Governmental	Status holder Right holder  Knowledge sharing Networking/ cooperation	National Water Management Agreement (Nationaal bestuursakkord water)

<b>Management Board Lauwers Lake (ONPL)</b>	Municipality De Marne, Municipality Dongeradeel, Municipality Kollumerland, Municipality Zuidhorn, Ministry LNV, Ministry of Defence, North Dutch Organisation for the Agriculture and Horticulture, (Noordelijk Land-en Tuinbouw Organisatie (NLTO), Province Groningen, Province Friesland, Recreation Authority De Marrekrite, Staatsbosbeheer Friesland, Water Board Groningen (Noorderzijlvest) Water Board	Land use planning/ management Lauwers Lake  Identification of the state of nature  Development of alternative management strategies  Public consultation	Provincial Collective Individual	Administration Civil Society Economy Third Sector	Share holder Right holder  Knowledge sharing Networking/ cooperation Monitoring Evaluation Decision making	Management Plan National Park Lauwers Lake(Beheer en Inrichtingsplan NPL)
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	Friesland (Wetterskip Fryslân)					
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<p>Permanent commission for administration and consultation</p>	<p>Municipality De Marne, Municipality Dongeradeel, Municipality Kollumerland, Municipality Zuidhorn, Ministry LNV, Ministry of Defence, North Dutch Organisation for the Agriculture and Horticulture, (Noordelijk Land- enTuinbouw Organisatie (NLTO), Province Groningen, Province Friesland, Recreation Authority De Marrekrite, Staatsbosbeheer, Friesland LEADER+ Lauwersland, Association Guozzekrite, Association Nature monuments</p>			<p>Administration Civil SocietyEconomy Third Sector</p>	<p>Share holder Right holder  Knowledge sharing Networking/ cooperation Monitoring Evaluation</p>	
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	(Natuurmonumenten), Wild animal stock management (Wild-beheereenheden), Water Board Groningen (Noorderzijlvest), Water Board Friesland (Wetterskip Fryslân)					
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<b>Project Group Lauwers LakeVision (Projectgroep Lauwers LakeVisie) and Technical project group</b>	G.Miedema, (Prov. Groningen (leader)) L v/d Berg, (Prov. Groningen (secretary)) J. v/d Wijk, (Prov. Groningen) H. Schuurman, (Prov. Groningen) H. de Haan, (Prov. Friesland) J. J. Buyse, Prov.Friesland) T. Claassen, (Water Board Friesland (Wetterskip Fryslân)) A. Kuypers, (Water Board Friesland (Wetterskip Fryslân)) H.Paap, (Water Board Friesland (Wetterskip Fryslân)) D.Slagman, (Water Board Groningen)	Accompanying and supervision research and development phases Water Vision	Provincial individual	Administration Civil Society Economy Third Sector	Share holder Right holder  Knowledge sharing Networking/ cooperation Monitoring Evaluation	
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	<p>(Waterschap Noorderzijlvest))  G.Leene,  (Water Board Groningen Waterschap Noorderzijlvest))  S. Vos,  Water Board Groningen  (Waterschap Noorderzijlvest))  K. Borrius,  (Departement North- Water Management) L. Klamer,  (Ministry LNV)  H. Hut,  (Staatsbosbeheer)  <b><u>Technical project group:</u></b>  H Paap,  (Water Board Friesland (Wetterskip Fryslân))  S. Vos,  (Water Board Groningen (Waterschap Noorderzijlvest))</p>					
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<b>Lauwersmeer Council</b>	Province Friesland Province Groningen Water Board Groningen (Noorderzijlvest) Water Board Friesland (Wetterskip Fryslân) Department Water Management Ministry of LNV	Counselling best future watermanagement strategy	Provincial Collective	Administration Economy Public Enterprise	Share holder Right holder  Decision making Knowledge sharing Counselling Monitoring Evaluation	
<b>Staatsbos Beheer</b>		Management Lauwers Lake Park	National Collective	Administration Economy Public Enterprise	Right holder Knowledge holder Spatial holder Share holder  Finance Monitoring Evaluation Networking/ cooperation	
<b>It Fryske Gea</b>		Environmental protection	Regional Individual	Civil Society	Interest holders Knowledge holder  Networking/ cooperation	

<b>Friese Milieu Federatie</b>		Environmental protection Mating organisations	Regional Individual	Civil Society	Interest holders Knowledge holder  Networking/ cooperation	
<b>Milieufederatie Drenthe</b>		Environmental protection Mating organisations	Regional Individual	Civil Society	Interest holders Knowledge holder Networking/ cooperation	
<b>Milieufederatie Groningen</b>		Environmental protection Mating organisations	Regional Individual	Civil Society	Interest holders Knowledge holder  Networking/ cooperation	
<b>Natuur-monumenten</b>		Purchase of green areas Environmental protection	National Individual	Civil Society	Interest holders Knowledge holder Space holder  Networking/ cooperation	
<b>Het Groninger Landschap</b>		Purchase of green areas Environmental protection	Regional Individual	Civil Society	Interest holders Knowledge holder Space holder  Networking/ cooperation	

<b>Wadden- vereniging</b>		Protection of wet land	Regional Individual	Civil Society	Interest holders Knowledge holder  Networking/ cooperation	
<b>Acardis</b>					Knowledge holder/ Knowledge broker	
<b>A&amp;W</b>					Knowledge holder/ Knowledge broker	
<b>Iwaco</b>					Knowledge holder/ Knowledge broker	
<b>HKV</b>			Individual	Third Sector	Knowledge holder/ Knowledge broker	



## Part 2: Case study on particulate matter

Pieter-Jan Klok, Bas Denters

### *0 National legal and institutional setting*

The European regulations concerning particulate matter (1999/30EG) have been translated in Dutch national law through several national regulations. The original provisions have been included through a governmental regulation in 1998<sup>5</sup>. Starting from September 2004 the Supreme court for administrative law started to prohibit projects that would be developed in areas where the standard were not expected to be met from January 2005 (the day the standards would come to effect). A number of rulings followed in November 2004 and the beginning of 2005. These rulings are the result of two factors that are specific for the Dutch situation: a strict interpretation of the law by the supreme court and a direct legal connection that is made between procedures of land-use planning and air quality regulations. In making decisions in legal procedure concerning land-use planning the supreme court has to take environmental regulations into consideration, including the air quality standards. This implies that a local land-use plan (that has to be decided by every municipality developing a new project), can, and will, be rejected when the projected activities in the area will increase particulate matter emissions in situations where standards will not be met in the near future. This link between land-use planning and air quality regulations is unique in Europe<sup>6</sup>.

When it became apparent that these provisions would cause important problems because the standards would not be met in many places and new projects in large parts of the country would be in danger, the national government became active in a number of ways. On the European level the Dutch government tried to speed up possibilities to allow reductions of natural levels of PM10 (mainly sea salt). At the same time a regulation was discussed to allow a 'net-effect calculation' (saldering), where projects would be allowed when their total effect in terms of emissions was positive (an increase in emissions in a specific location would be more than compensated by reductions in other locations). Both initiatives were successfully translated into national regulations<sup>7</sup> and resulted in some relief in terms of the legal problems<sup>8</sup>. A new version of the national provisions, adapted to the new situation became effective in August 2005<sup>9</sup>. New national provisions on how to measure and calculate air quality levels in local situations (relevant for our case) became effective in 2006<sup>10</sup>.

In the 2005 period the leading storyline in the national discourse was that 'the Netherlands had been 'locked' by the strict interpretation of the air quality regulations'. In this period media and political attention was very high. Elements of

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<sup>5</sup> Besluit luchtkwaliteit 25 april 1998.

<sup>6</sup> Consequenties van de EU-luchtkwaliteitsrichtlijnen voor ruimtelijke ontwikkelingsplannen in verschillende EU-landen, NMP, 2005.

<sup>7</sup> Meetregeling luchtkwaliteit, juli 2005; regeling saldering luchtkwaliteit 2005, maart 2006.

<sup>8</sup> Naturally, they did not reduce PM10 emissions!

<sup>9</sup> Besluit luchtkwaliteit 2005.

<sup>10</sup> Meet- en rekenvoorschrift luchtkwaliteit, 27 november 2006.

the storyline were that it was unacceptable that all kind of elementary economic and social projects were blocked, an unnecessary strict judicial interpretation was used in an unwarranted and unjustified way, and government had to act decisively in order to end this unprecedented exception to what was happening in the rest of Europe. It is clear that the governance arrangements at this second order level of governance are dominantly hierarchical. Scientific expert/professional knowledge is very dominant in the legal procedures, in combination with institutional knowledge on national and European regulations. In the national and political debate, economic and everyday knowledge play an important role in the public and political arena. They are effective in producing political activity, but the course of events is dominated by the legal procedures and its consequences. The other knowledge forms can only make an impact through translation into expert and institutional knowledge.

On the national policy and institutional level several additional developments have to be noticed. A national cooperation program on air quality is being developed<sup>11</sup>. In this program a number of major projects are clustered in regional projects, where the cumulative effects that these projects as a whole have on air quality will be taken into consideration. This implies that municipalities are no longer obliged to follow legal procedure for every separate project (this is done on the regional level of the cluster). Additionally, this implies larger flexibility, for beneficial effects of one project can be used to compensate for detrimental effects of other project in the regional cluster. The Deventer business area A1 (our case) will be part of one of these regional clusters. The Deventer case was also involved in a national pilot project of the ministry for the Environment that aimed at operationalizing the practical possibilities of the 'net-effect' regulation<sup>12</sup> (see par. 1.1). This project was however only moderately successful. More effect (in terms of solving the legal issues) is expected from the newly proposed European regulations on air quality, that are to become effective in 2008. They provide the possibility of derogation of the standards on air quality for countries that can prove that they are likely to apply to the regulations in the future<sup>13</sup>. When derogation is applied, this implies that current standards will not have to be met until 2011 for PM<sub>10</sub> and until 2015 for NO<sub>2</sub>.

Meanwhile, current developments in measuring PM<sub>10</sub> levels on a national scale and changes in the emission factors used in models estimating PM<sub>10</sub> level in local situations have drastically reduced official estimates of PM<sub>10</sub><sup>14</sup>.

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<sup>11</sup> Nationaal samenwerkingsprogramma luchtkwaliteit (NSL).

<sup>12</sup> Pilotprojecten salderingsregeling besluit luchtkwaliteit 2005.

<sup>13</sup> Belangrijkste normen uit de nieuwe richtlijn luchtkwaliteit, MNP, december 2007.

<sup>14</sup> Fijnstofconcentraties, jaargemiddelde, daggemiddelde, 1994-2005/2006.

# 1 Context and conditions

## 1.1 Case history and spatial particularities



Map 1: Location of Deventer in the Netherlands

The Dutch case study on particulate matter involves a proposal to build an industrial or business area in the city of Deventer. Deventer, with a population of around 95.000, is located in the middle of the Netherlands, at the intersection of the IJssel river and the A1 motor highway, connecting Amsterdam (and the Randstad area) with Germany, Poland and the Baltic states (See map 1). The project to develop the business area (bedrijvenpark A1) originated in the beginning of the 90's. At those days the territory of the municipality of Deventer alongside the north of the A1 highway was already fully covered with industrial sites<sup>15</sup>, so the idea came to build a new area at the south of the A1. However, this area belonged to the territory of the

<sup>15</sup> Nowadays (since Januari 1 2005), the municipality of Deventer is enlarged, through a merger with the municipality of Batmen, located at the east of Deventer, alongside and north of the A1.

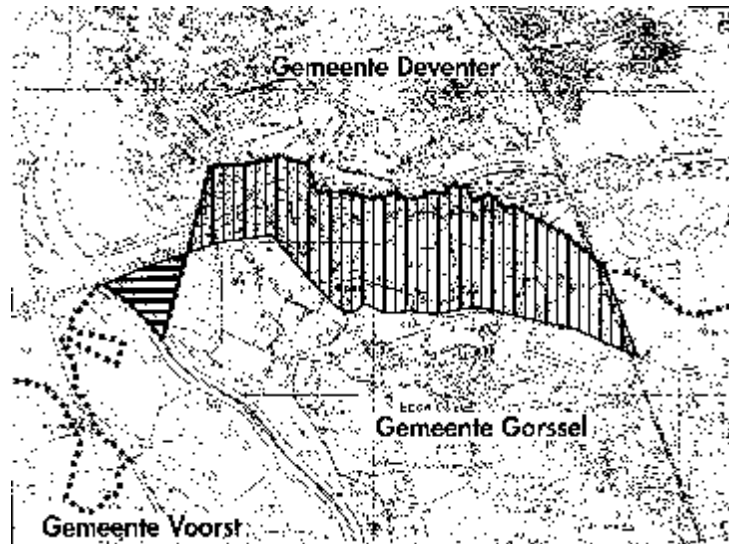


neighboring municipality of Gorssel, a small city to the south of Deventer and part of the Province of Gelderland (Deventer belongs to the Province of Overijssel)<sup>16</sup>.

As both the municipality of Gorssel and the Province of Gelderland were not too keen on developing the business area, the municipality of Deventer, together with the Province of Overijssel started a procedure to change the borders between the municipalities of Deventer and Gorssel (and consequently the borders between the provinces). Once the area envisaged for the business area would be part of the territory of Deventer, the municipality would be able to develop the plan. The proposal of Deventer to incorporate the area intensified the conflict between the two cities and the provinces. In Gorssel the opposition was led by the inhabitants of the village of Epse, located directly south of the envisaged business area, inhabitants of the area who would lose their house and land, mostly used for agricultural activities and citizens living directly west of the area, next to a provincial road feeding the A1 from the south. These citizens organized themselves in an association (Vereniging woonmilieu Epse, VWE), founded in 1990, when the first ideas about the business area became public.

To cut a long history of discussion short: Deventer and Overijssel convinced national government that an annexation of the area was vital for the economic development of Deventer and a formal Cabinet decision to change the borders was taken on November 20, 1998<sup>17</sup>. This decision was brought to a regional court by both the VWE and the municipality of Gorssel and the appeal of Gorssel was successful because the wrong procedure had been used: it should have been a formal law (including a decision by national parliament) instead of a Cabinet decision<sup>18</sup>. In the course of 1999 the formal law was prepared and finally accepted on December 14 of that year, taking effect on January 1, 2000<sup>19</sup>. This concluded a period of intensive lobbying between the different actors involved and national political parties. Of those parties only three small parties (two on the left: Socialist Party and Green Party; and fundamental Christian Party, SGP) voted against the law<sup>20</sup>. A map showing the area that changed from the municipality (Gemeente) of Gorssel to Deventer is presented below (vertical lines show area that becomes Deventer, horizontal lines show area that changes from Deventer to Gorssel).

*Map 2: Changing borders between Deventer and Gorssel*



<sup>16</sup> Since January 1, 2005 Gorssel has merged with the municipality of Lochem, located at the east of Gorssel and south of the A1.

<sup>17</sup> Stb. 1998, 653.

<sup>18</sup> Stb. 1999, 102.

<sup>19</sup> Stb. 1999, 555

<sup>20</sup> Handelingen Tweede Kamer, 1999-2000, 16-1133.

Connected to the decision to change the border between Deventer and Gorssel is the decision to create a 200 meter 'buffer zone' between the business area and the village of Epse, and use a zoning strategy inside the area, in order to reduce inconvenience to the citizens living in the vicinity of the area<sup>21</sup>.

In the last stage of the parliamentary discussion on the law, when a majority in favor of the proposal seemed inevitable, the municipalities of Deventer and Gorssel came to an agreement on the development of the business area, specifying the conditions under which the area could be developed. This agreement was also signed by the two Provinces<sup>22</sup>. For Deventer the agreement contained the basic agreement on developing the area, for Gorssel the agreement specified a number of conditions that Deventer would have to take into account when developing it (a number of conditions regarding the buffer zone, conditions on the scope and height of the buildings and conditions regarding traffic infrastructure).

Meanwhile the municipality of Deventer had already started in 1998 with preparing the documents that would start the environmental impact assessment procedure that was to be used in the process of developing the plan for the area<sup>23</sup>. This procedure is linked with the procedure on land-use planning, which is the second major set of regulations guiding the process of developing the plan (for additional information on the different rules and regulations, see par. 1.2). The final decisions on these documents however had to wait until March 2000, in order for the border correction to become effective<sup>24</sup>. These documents contain a proposal from the municipality specifying which information will have to be used in the impact assessment. This proposal is sent to the national committee on impact assessment, which will check whether it is in line with the guidelines from the law on environmental impact assessment. As a matter of practice this committee prepares a document specifying the information it advises the municipality to use in the process (based on the committee's interpretation of the law). This advice by the committee was prepared in June 2000 and was accepted as the guideline for the assessment by the municipality of Deventer in July<sup>25</sup>. We will not describe the elements of information or knowledge that this document contains in detail here (some elements will be discussed in par. 4 and 5), but in order to give some idea: the guideline for the environmental impact assessment is 16 pages long and specifies over one hundred pieces of information that have to be used<sup>26</sup>.

The process of developing the plan took considerably more time than was expected at the start of the process. During the process of developing the plan, the municipality of Deventer already decided that a new stadium for the local football club was to be build in the business area<sup>27</sup>. In October 2002 the environmental impact assessment was accepted by the council of Deventer<sup>28</sup>. Based on the choice for one of the alternatives studied in the assessment, a 'City-development plan' was prepared and finalized in April 2003<sup>29</sup> (see map 3).

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<sup>21</sup> Tweede Kamer, 1998-1999, 26 528, nr. 3

<sup>22</sup> Bestuursaccoord tussen de gemeenten Gorssel en Deventer inzake de ontwikkeling van een bedrijventerrein nabij Epse, september 1999.

<sup>23</sup> Startnotitie Milieu-effectrapportage bedrijvenpark A1, Deventer, December 1998.

<sup>24</sup> Besluit gemeenteraad Deventer, 27 maart 2000.

<sup>25</sup> Besluit gemeenteraad Deventer, 17 juli 2000.

<sup>26</sup> Advies voor de richtlijnen voor de MER bedrijvenpark A1, Commissie Mer, juni 2000.

<sup>27</sup> Besluit gemeenteraad Deventer, 14 november 2000.

<sup>28</sup> Oranjewoud, MER Bedrijventerrein A1, beslissing van de gemeenteraad Deventer, 28-10-2002

<sup>29</sup> B + B, Stedenbouwkundig plan en beeldkwaliteitsplan, 2003.

Map 3: 2003 plan for the area



This plan and the environmental impact assessment formed the basis for the pre-draft land-use planning document that was presented by the municipality of Deventer in May 2003<sup>30</sup>. In line with the rules from the Dutch law on land-use planning these documents have been discussed in public meetings in the summer of 2003 and citizens and organizations were given the opportunity to present their opinions on the plans, both in meetings and in written form. Due to an initial procedural mistake by the municipality (the public meeting was announced too close to the date of the meeting), the official public meeting was organized twice (on June 10 and September 25). The proposal from the municipality met fierce opposition in both meetings and in written reactions. The municipality of Gorssel attacked the plan for being not in accordance with the agreement they had signed with Deventer in 1999 on several topics (for a more detailed discussion on the content of the topics and the issues see par. 1.3, for more details on the role of different actors and modes of interaction, see section 2). The association of inhabitants of Epse (VWE) attacked the proposal on similar grounds, but added a list of complaints on the information used and the content of the environmental impact assessment. The regional water authority rejected the entire idea of using the area for a business area<sup>31</sup>.

The next step in the process consisted of a check of the proposal and the process by the national committee for environmental impact assessment. In its comments this committee concluded that the impact assessment was inadequate and that a new assessment had to be made<sup>32</sup>. Main issues were the way in which the most environmental friendly alternative was constructed and compared to other alternatives, water issues in the area, issues on information on traffic and related air quality and issues concerning the proposed ecological zone in the area.

<sup>30</sup> Voorontwerp bestemmingsplan Bedrijvenpark A1, Amer, 2003

<sup>31</sup> Inventory of comments and subsequent reactions from the municipality of Deventer, 2005.

<sup>32</sup> Toetsingsadvies over het milieueffectrapport Bedrijventerrein A1 te Deventer, January 2004.

The rejection of the proposal by the committee was a major set-back for the municipality of Deventer. The municipality decided that it was necessary to change its plans on a number of issues, in order to get the proposal in line with previous agreements made and more in line with the preferences of several important actors. Additionally the municipality decided to become more interactive in its approach, developing the proposal more in consultation with important actors in the process. This resulted among others in an additional agreement between the municipalities of Gorssel and Deventer, which implied that Gorssel would agree with the development of the business area and Deventer would develop the plan in accordance with the specified conditions they had negotiated. In the course of the process several aspects of the plan were investigated more thoroughly, resulting in a large set of documents analyzing many issues that were relevant for the decision (for a more extensive discussion on the use of knowledge in the process, see section 4). This resulted among others in a new version of the City-development plan<sup>33</sup>, the environmental impact assessment<sup>34</sup> and the land-use plan<sup>35</sup> (see map 4). These were discussed in a public meeting on June 6, 2005. The new plan included several changes to suit the preferences of major actors. Among others: a specific plan for the buffer-zone, lower buildings alongside the buffer-zone, skipping the football stadium, improved traffic infrastructure and eco-zone, and an intention to settle the problems concerning water with the regional water authority (see also par. 1.3). Reactions to the new plan are mixed. In general there is appreciation for both the new style of governance (more interactive) and the content of the changes in the plan, even from the association of citizens<sup>36</sup>. However the VWE still opposes the entire plan, using a large number of arguments (to give an idea: the written reactions of the VWE opposing the impact assessment and the land-use plan are 17 and 18 pages long<sup>37</sup>).

*Map 4: The 2005 plan for the area.*



<sup>33</sup> Stedenbouwkundig plan Bedrijvenpark A1 Gemeente Deventer, Arcadis, 2004.

<sup>34</sup> Milieueffectrapportage Bedrijvenpark A1 Deventer, Arcadis, 2005.

<sup>35</sup> Ontwerpbestemmingsplan Bedrijvenpark A1 Deventer, Amer, 2005.

<sup>36</sup> Verslag inspraak en informatieavond MER bedrijvenpark A1, June 8 2005

<sup>37</sup> Opmerkingen bij het milieueffectrapport bedrijvenpark A1 2005, VWE 2005; Zienswijze ontwerpbestemmingsplan Bedrijvenpark A1, VWE, 2005

Parallel to the public meeting in June the impact of the legislation on small particulates on the plan became more and more clear. The air quality report on the plan indicated that building the business area would deteriorate air quality in some spots that were already not meeting PM<sub>10</sub> and NO<sub>2</sub> standards<sup>38</sup>. Developments on the national level made clear that projects like the business area A1 would not be allowed in case the air quality predictions indicated that standards would not be met in the future and that building the area would deteriorate the situation. For the municipality of Deventer this development was a severe blow, because the entire process came to a halt. One participant made reference to this 'blow' by dividing the process in two episodes: "before and after the 'bomb'".<sup>39</sup> The next step in the procedure would have been sending the proposal to the national committee for environmental impact assessment, but after some consultation it was clear that they would not give a positive advice as long as the air quality standards would not be met. Subsequently, the municipality decided not to send the proposal to the committee.

As there were many projects in the Netherlands that came to a halt due to the air quality standards, the ministry for Environmental Affairs started a project in which experts involved in 12 'pilot-projects' and national experts would study the possibilities to resolve the air quality issues. The most important option studied was 'compensating' the emissions ('saldering'), where a small deterioration of the situation in some spots would be allowed if they were compensated by a larger set of improvements in other spots, due to the same project (see section I.2). The Deventer business area was one of these pilot projects. However, after some analysis it was concluded that there were no possibilities to compensate or to meet the standards, with policy options that were within the limits of being economically viable<sup>40</sup>. The practical implication has been that up until the beginning of 2008 the formal procedure is still at the same deadlock that became apparent in the summer of 2005.

However, some developments can be described. The municipality of Deventer has settled the water issues with the regional water authority and the municipality of Lochem (now containing Gorssel, because of a merger in 2005) in a three party agreement that will be formally signed in the near future<sup>41</sup>. New predictions on air quality with a more sophisticated model indicate that PM<sub>10</sub> standards will be met, due to lower levels of background emissions and reduced emission factors for traffic. However, NO<sub>2</sub> standards will still cause problems with the current predictions<sup>42</sup>. In the course of 2008, it is however expected that the Netherlands will be able to use the derogation possibilities enclosed in the new European regulations (approved by the European Parliament December 11), indicating that meeting the EU standards will be postponed to 2011 for PM<sub>10</sub> and 2015 for NO<sub>2</sub><sup>43</sup>. The formal procedure to develop the area is expected to restart in spring 2008 or after July 1, when a change in the law on land-use planning is expected to simplify the procedure<sup>44</sup>.

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<sup>38</sup> Luchtkwaliteit Bedrijvenpark A1 Deventer, Oranjewoud, 2005

<sup>39</sup> Interview, 17-1-2008.

<sup>40</sup> Plussen en minnen, Eindevaluatie pilotprojecten salderingsregeling Besluit luchtkwaliteit 2005, VROM, 2006

<sup>41</sup> Press release April 2006 and interview 5-11-2007.

<sup>42</sup> Interview, 17-1-2008.

<sup>43</sup> Belangrijkste normen uit de nieuwe richtlijn luchtkwaliteit, MNP, december 2007.

<sup>44</sup> Interview 5-11-2007.

## 1.2 Rules and regulations

Apart from the regulations on air quality described in the section on the national legal and institutional setting, two legislative areas are of special importance for our case: the law on land-use planning and the law on environmental impact assessment.

The law on land-use planning prescribes that municipalities regulate the use of land in their territory by making specific land-use plans that provide regulations concerning the types of activities that can be developed in the area and the regulations that have to be met when using the area<sup>45</sup>. Any newly developed project like the business area involves a change in land-use (in this case mainly from agricultural use to economic use and traffic infrastructure) and thus requires a new land-use plan. The provision of the plan is a decision by the municipal council, but it involves an extensive legal procedure, usually taking more than a year. The municipality has to develop a pre-draft version of the land-use plan, that contains a motivation of the admissibility of the envisaged use of the area and the accompanying regulations for this use. This pre-draft is to be discussed with relevant stakeholders holding related competences and is to be published to the general public, that is given the opportunity to react to the proposal, during a four week period, in word (public meeting) and in writing. The Board of mayor and aldermen of the municipality considers the reactions and formulates a draft version of the plan, that is again published and open for reactions to the public. These reactions will be directed at the city council, which subsequently has to decide on the plan. After this decision the plan will be send to the province, where it will be considered by the executive body of the province. Once this body has given its approval, the plan will be published again and stakeholders can formulate complaints to the provincial council, that has to decide on possible complaints. Once the council have given its approval, the plan is send back to the municipality, where it is again published. During a six week period the stakeholders that have made complaints during the procedure can take the plan to the supreme court on administrative law, where it is be judged in the final instance. When it is approved in this final arena, the land-use plan will come into effect. In case the plan is disapproved somewhere in the procedure, the municipality can (has to) restart the process from the start.

The legal provisions concerning environmental impact assessment are part of the general Dutch environmental law. This law states that projects from a certain magnitude need an environmental impact assessment<sup>46</sup>. This impact assessment is usually coordinated with the procedure on land-use planning. The process starts with a notification that an impact assessment will be made to the national committee overseeing impact assessments. The municipal council presents a draft document stating the nature of the activities that will be developed in the project, the alternatives that will be assessed and presents an overview of the relevant environmental aspects that will be investigated. The law provides an extensive list of aspects that have to be investigated in an assessment. This draft document is published and can be commented upon by local stakeholders. The national committee gives an advice to the municipality on the elements that have to be part of the assessment. After taking the advice into consideration, the municipal council decides on a document describing the elements that will have to be studied in the specific assessment. The administrative staff does the assessment and presents a document that is to be presented to the Board of Mayor and Aldermen. When the board agrees, the assessment has to be accepted by the municipal council. When

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<sup>45</sup> Stb., 2000, 8.

<sup>46</sup> Stb., 1994, 540; 2006, 389.

they judge the assessment to be adequate, it is published and all stakeholders are allowed to comment on the assessment in word (in a public meeting)<sup>47</sup> and in writing. The reactions and the assessment are sent to the national committee, in order to check whether all legal procedures have been taken into account. In case the assessment is rejected by the committee, the municipality will have to make a new assessment, that has to be published and can be commented upon. In case the assessment is approved by the committee, the municipal council will finalize the assessment. In the final plan on the project (usually the land-use plan), the municipality will indicate in which way the assessments as such and the comments on the assessments have been considered in the plan and how the remaining issues are resolved.

These two legislative areas are the major ones guiding the institutional arrangements in terms of the *process* in the Deventer case. This does not imply that they are the only ones that are relevant. A host of environmental and other provisions are relevant in terms of noise, soil and water quality, water management, natural (flora and fauna) and landscape regulations, heritage and cultural resources. However, these provisions set scope and authority rules that are usually incorporated in the environmental impact assessment: they provide the legal basis for the way in which the different impacts have to be assessed and taken into consideration in the decision making process. We do not have enough space to describe all these provisions.

### 1.3 Themes and problems

A project like building a business area in a densely populated country like the Netherlands is a complex task indeed. This has implications for the number of issues (themes) that arise and the related problems that are encountered. It would take too much space to describe all the specific issues that have been encountered and discussed during the process. We will concentrate on the issues that are most salient and relevant and cluster them somewhat along the lines of the three substantial dimensions of sustainability: economic, social and ecological sustainability. Additional to these substantial issues, we describe a number of procedural issues that have appeared in the process.

#### *Themes related to economic sustainability*

- The basic feature of the project is that it is aimed at improving the local economy in Deventer, through attracting new businesses and increasing employment<sup>48</sup>. Related issues are the necessity of additional land for business use (do we need extra acres of land or can we use existing areas to attract new employment) and the estimations of future demand for business areas (related to predictions for economic growth). Another related theme is the question whether Deventer as a city needs additional employment, given the current and future levels of unemployment (which are relatively high). This aspect is also clearly connected to the social dimension of sustainability: we need jobs to improve the social conditions of people without jobs.

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<sup>47</sup> Usually this meeting is combined with the one on the pre-draft of the land-use plan.

<sup>48</sup> The different themes described in this paragraph are referred to in a large number of documents. In order to prevent a massive number of footnotes, we will suffice with this general reference to the most important documents: the environmental impact assessments (2003 and 2005), the draft land-use plans (2003 and 2005), the inventory of reactions from actors (oral and written) in 2003, oral reactions in 2005, formal written reactions of the VWE in 2003 and 2005.



- Given the need for additional business areas, what would be the most preferable location in the city of Deventer, and its neighboring cities in the region? The location discussion has themes related to all three dimensions of sustainability: economic: which is the most attractive location for businesses, for instance in relation to 'visibility' and 'accessibility' in terms of traffic; social: which location creates most jobs for those who need them, but generates the least inconvenience for citizens living in the vicinity; and ecological: which location creates the least deterioration in ecological values?
- The economic viability of the project as such. Realization of the business area involves costs (acquiring the land, building infrastructure, mitigating ecological effects) and produces benefits (land sold to companies, long term revenues). To what extent is the balance of these costs and benefits positive or negative? Related to this is the issue of the size of the area that can effectively be used for businesses. A larger size improves economic viability, but might increase social and ecological problems. Proposals vary between 70 ha and 55 ha.

#### *Themes related to social sustainability*

- In terms of social sustainability the most important issues relate to the consequences of the plan for the people living in the area (who will lose their house and agricultural assets) and people living in the vicinity of the area who will suffer inconvenience from the business activities. On the positive side there are possible improvements of social conditions stemming from economic activities (like employment, mentioned above).
- What are the policy options that can be used to limit traffic by cars and lorries (stimulate public transport and biking), in order to reduce social inconvenience produced by traffic congestion?
- What are the possibilities to reduce social inconvenience (visual, noise, smell, light) for citizens living in the vicinity of the area through design of buildings and infrastructure (creating zones with different regulations within the area)?
- Do we need a new football stadium in the area? A new football stadium will improve social conditions for football fans, but might create inconvenience for citizens living close to the area, though noise, parking problems and hooliganism. A new stadium might attract related economic activity (economic sustainability), but the land use for the stadium and parking facilities can not be used for 'proper' business activities, thus reducing the economic potential of the area.
- How can we create an area that is socially safe (at evenings and nights) for citizens residing in or traveling through the area?
- What is the impact of building the area on the quality of the landscape in terms of its historical/cultural values (including possibilities for archeological findings in the area). Can cultural values be preserved within the design of the area?

#### *Themes related to ecological sustainability*

- The core of the ecological issues relates to the destruction of the current ecological values of the area (primarily landscape of meadows and some trees), by turning it into a business area, as well as the ecological effects of the future business activities to the surroundings of the area.
- Which type of business activities will be accepted in the area, related to the ecological effects of their activities on site, and the amount of traffic that they generate?
- In what way can the negative consequences of building the area in terms of water management be mitigated? Water issues include: flow of water and water retention of surface water (streams and ponds), removing rain and waste water from the area, infiltration capacity of water into soil and percolation of water from nearby rivers (IJssel and Schipbeek).



- In what way can the negative consequences of building the area in terms of air quality be mitigated? Which industrial activities should be tolerated in relation to air quality? Which effects are expected from the increase in traffic related to the business activities in the area and how can they be mitigated?
- In what way does the development of the business area influence the 'nature' value of the area and its surroundings (flora and fauna)? To which extent can negative consequences be offset by creating new natural elements in the area and its surroundings (eco-zone)?
- To what extent is the soil in the area contaminated with toxic material and to what level should this contamination be removed?

#### *Procedural issues*

- Which kind of issues should be dealt with in motivation the decision process (is information gathered comprehensive) and what is the quality of this information (both in terms of validity and in terms of being 'up to date')?
- How many alternatives should be distinguished in the process and what are their essential features (in terms of the dimensions of sustainability mentioned above)?
- To what level are the choices made in the process consistent in terms of the different dimensions of sustainability?
- To what extent are actual regulations proposed in the land-use plan consistent with basic assumptions and motivations underpinning the decision and sufficient in terms of prevention of undesired economic activities or consequences?
- To what extent are regulations flexible enough to accommodate unforeseen future developments, yet stable enough to protect citizens and the environment from harmful developments?

## **1.4 Media attention**

The business area A1 is a project that is on the one hand seen as quite important for the economic viability of the city. On the other hand it is seen as quite controversial, because of the fierce resistance of citizens and several authorities. Naturally such a project attracts substantial media coverage. In a database of articles of the local newspaper we found 48 articles related to the project in the period from 1999 thru 2007<sup>49</sup>. It would take too much space to present a full analysis of all of these articles. Therefore we will describe the most salient issues, related to specific stages of the process, and give a general impression of the dominant 'story-lines'.

Fall of 1999: national parliament discusses change of border between Deventer and Gorssel.

- Cities of Deventer and Gorssel are working on agreement concerning border change.
- Gorssel and Deventer agree on change, with help of both provinces.
- Deal between Gorssel and Deventer on keeping the buffer zone Gorssel territory disregarded by national parliament. Cities have the intent to change the borders concerning the buffer zone back in the future.
- Area Epse-North finally Deventer territory, citizens will be informed.

Fall of 2000: Deventer decides to build football stadium in business area

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<sup>49</sup> Web-based database, containing all articles of 'de Stentor', local newspaper for Deventer, from 1999 to present.

- Citizens of Epse more determinate than ever to resist business area, because Deventer is not to be trusted: they got our land because they needed economic development, now they use it for their football club.
- Citizens appeal to Cabinet Minister to prevent stadium, but fail.
- Ecological zone next to football stadium: Badgers are expected to be football fans.

Summer 2001: Plan is under development, but takes more time

- Deventer working on environmental impact assessment, changes in national land use policy result in delay.
- Deventer surprised by proposals Gorssel concerning the buffer zone: Gorssel unilaterally proposes a wall made of soil, whereas the plan should be developed together with Deventer.

February 2002: Citizens claim Deventer will not stick to agreement, politicians deny

- VWE claim that the plan will contain a larger area than agreed in the 1999 proposal that formed the basis for the border change (70 instead of 55 ha.) and that buffer zone will be to some extent on Gorssel territory.
- Alderman from Gorssel expects that Deventer will live up to the agreement.
- Alderman from Deventer denies original agreement on 55 ha.

Summer 2003: Citizens and Gorssel furious about proposal Deventer

- Both city council and board of mayor and aldermen of Gorssel are furious because proposal from Deventer is clearly not in accordance with agreements made in 1999.
- Public meeting discussing the proposal has to be rescheduled because announcement was not in accordance with the law.
- Citizens from Epse are determinate to use all legal instruments available.

January 2004: Environmental impact assessment insufficient according to national committee.

- Advice from national committee on impact assessment 'devastating' for proposal business area.
- Political parties in Deventer council ask questions on many 'blunders' in the process of developing the business area A1.

Summer 2004: Deventer will amend proposal to make it more in accordance with preferences citizens Epse and previous agreements.

December 2004: Cities of Deventer and Gorssel have agreement on buffer zone and several other aspect of the proposal.

April 2004: EU regulations on air quality pose threat to business area A1.

- National Cabinet has tried to ameliorate consequences of jurisdiction on air quality, but failed. Water authority also still determinate to fight new proposal.

Summer 2005: New proposal discussed in meeting.

- VWE positive on 'learning' by Deventer on several issues, but still against proposal because of limited buffer zone and other issues.
- Individual citizens announce they will fight the proposal with all available judicial means.

September 2005: Plan for business area still haunted by setbacks, but special pilot project using balancing act (saldering) might bring relief.

November 2005: More delay for plans: water authority not yet in favor, air quality issues not yet settled.

April 2006: Agreement between Deventer and Lochem on water and nature issues

## **2 The action arenas**

### **2.1 Arenas and actors: resources and roles**

In a project like the development of the business area A1 a large number of actors are involved in a number of different arenas. To give an example: the first draft land-use plan resulted in written reactions from 18 different organizations and reactions (written and oral) from 55 participants<sup>50</sup>. Many actors are organizations, each containing several different personal actors, who decide in organizational action arenas about the actions on behalf of the organization. In order to structure the description of the actors involved we have to cluster them in different groups, related to different arenas that are relevant in the process.

The central organizational actor in the process is the *municipality of Deventer*. This organization takes the initiative in developing the area and has a number of competencies in the process. Within the municipality, at least four groups of actors have to be distinguished: the board of mayor and aldermen, the city council, public officials and hired experts. The *board of mayor and alderman* (BMA) is the executive board and is elected by the city council. It consists of 5 aldermen, with specific portfolios and the mayor. Meetings of the BMA can be regarded as an arena, where formal decisions are made by the collective board, based on majority voting. In practice the aldermen are to some extent primary responsible for their own portfolio, especially in the political direction of the public officials that work on issues in their portfolio. The mayor has limited specific political responsibilities, but has a general responsibility for quality of interaction and legitimacy in the municipality. Given the complexity of the business area project, different aldermen are involved in the project, mainly the alderman for economic affairs (for developing the basically economic project), the alderman for land-use planning (for the main planning procedure in building the area is his responsibility) and the alderman for environmental affairs and traffic (responsible for the environmental impact assessment and air quality issues that are mostly related to traffic). The *city council* of Deventer has 37 members who are directly elected every 4 years in a party system<sup>51</sup>. Currently the council consists of the following parties: Social Democrats (PvdA, 10 seats), Green Left (Groen links, 6 seats), Christian Democrats (CDA, 5 seats), a local rural interest party (APB, 5 seats), rightwing liberal party (VVD, 4 seats) and four small parties (2 or 1 seat). Four of the parties currently form the coalition and are delivering aldermen for the BMA: PvdA with 2 aldermen, Green Left, CDA and VVD with each 1 alderman. The city council takes all major formal decisions in the municipality by simple majority voting. In practice the BMA is however mostly leading the way and the coalition parties generally support their policies. The *public officials* in the municipality of Deventer are hired as employees

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<sup>50</sup> Commentaarnota Bedrijvenpark A1, Gemeente Deventer, 2005

<sup>51</sup> The current council is elected for 5 years due to the merger with the municipality of Batmen in 2005, which implied an early election (normally the council would have been elected in March 2006)

based on expertise (no political appointments). Several officials with relevant expertise are working on the project, including a general project manager who coordinates all public activities. The public organization has a general management structure, again based on expertise and without political appointments. Managers will be involved in discussing major issues within the bureaucracy, together with the aldermen that are responsible for the issue. A major project like the business area A1 will involve specific expertise that is not available in the municipal organization. This implies that the municipality will *hire additional expertise* in different fields from commercial professional companies. In this case several companies are involved in different stages of the project, including roughly around 20 people. We will describe these knowledge holders in more detail in paragraph 4.2. In the 2003-2005 period, even the project manager was hired from a consultancy firm, currently the project manager is a public official. Experts hired by the municipality can be regarded as a temporally additional labor force at the service of the municipality. It is clear that the municipality of Deventer has central resources related to the process: a budget to spend on labor, on developing and implementing the plan; central competencies, expertise and knowledge, part of the land is owned by the municipality, but 2/3 is owned by private investment companies.

The second municipality involved in the process is *Gorssel* (from 2005 part of Lochem). The basic structure of the municipality is the same as that of Deventer, but since it was much smaller, the number of Aldermen was 3 and the council consisted of only 15 members. The administrative staff is also much smaller, resulting in a lower level of specialized expertise. From Gorssel, mainly one of the alderman (P. Schrijver) has been involved with the process and a limited number of public officials. The council as a whole has been active on a few occasions. Until now the municipality of Lochem has not been very active in the broad range of issues, but has been active in the water issues, negotiating with Deventer and the water authority on water facilities on Lochem territory.

As Gorssel had no longer jurisdiction over the area to be developed after the border correction of 2000, its formal competencies are limited. In terms of legal status it is a stakeholder, just as other parties involved (organizations and citizens). However, in the agreement between the municipalities dating from 1999, it was agreed that the plan for the buffer-zone was to be developed by the municipalities together. Gorssel was also awarded some competencies on monitoring the conditions that were formulated for the plan<sup>52</sup>. As a smaller municipality the budget of Gorssel for expertise was only a fraction of the Deventer budget<sup>53</sup>.

The *province of Overijssel*, as a higher level government for Deventer is involved in a number of issues. It formulates its own economic policy and the location of major business areas as the A1 area, is an important element in this policy (related to the coordination of these areas over the jurisdiction of the province). As such, Overijssel played a major role in the initiation of the project and the border correction between the cities. In terms of land-use planning the province has to monitor and approve all new land-use permits that municipalities provide. The general organization of the province is along the same line as the municipalities, with an executive board elected by the provincial council, that is directly elected by the citizens every four years. In the process, the major actors playing a role on behalf of the province are the members of the provincial executive with the two central policy issues in their portfolio and the public officials with related expertise.

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<sup>52</sup> Bestuursaccordering tussen de gemeenten Gorssel en Deventer inzake de ontwikkeling van een bedrijventerrein nabij Epse, september 1999.

<sup>53</sup> Gorssel provided itself a budget for external expertise of approximately €13.000 in the beginning of 2001.

The main resources of the province are its formal competencies, expertise and substantial budgets.

The main actor opposing the development of the business area is the association of citizens of Epse: '*Association Living-environment Epse*' (VWE). It was founded in 1990 and is in a formal sense an association under Dutch law, which implies that it has a board, elected by its members, that is governing the association. In terms of competences it has roughly the same possibilities as any citizen that has a stake in the process. The basic resources of the association are its members and their bundled expertise, a small budget from a fee that members pay and from occasional gifts, and the legitimacy of representing a large group of citizens. The VWE has been active in all stages of the process and has spent some of its budget in hiring legal expertise. Most of its expertise is compiled of a group of members of roughly 10 persons with professional expertise in relevant issues through their work (generally not related to the project as such). More on these knowledge holders in paragraph 4.2. During the process the VWE has become acknowledged by other actors as a group that has to be treated with much respect in terms of their professionalism<sup>54</sup>. Separate from the VWE, individual citizens, mostly inhabitants of the area and people living directly next to the area, participate on their own account. In some cases they use hired legal experts to present their case.

The main group supporting the project consists of the Deventer *business community* (chamber of commerce, business clubs), joined by the regional office of the ministry of Economic Affairs. These groups are mostly active in the public debate related to the Deventer political arena, stressing the importance of additional possibilities for economic development. Because they have been very successful in promoting their agenda in these political cycles, they are not very active in the specific arenas where the plan is contested. They basically play the role of a dominant force in the background, based on their importance in terms of economic growth and employment (there are limited relations between firms and the municipality in terms of budgets, there is only a general tax on property, no local tax on economic activity).

The regional *water authority Rijn and IJssel* has most of the competences regarding water issues. Regional water authorities are one of the oldest forms of local government that exist in the Netherlands. They are an autonomous form of government, with a council that is elected by citizens and an executive body that is largely non-politicized (but reflects some basic interest, like agriculture and environmental groups). However, its governance is largely professionalized. They have exclusive competencies in water management, both in terms of quantity (keeping the Dutch from getting 'wet feet') and in terms of quality (preventing water pollution). One of the few exemptions is the delivery of drinking water to households and firms, as this is the competence of water delivery firms who used to be public agencies, but are nowadays privatized. The main resources of the water authority are its competences, its professional expertise, which is uncontested and its solid budgets, coming from a special tax on inhabitants and on pollution stemming from industrial activity.

Along the line some *groups play a role in specific issues* concerning the project. A couple of environmental groups are active in environmental issues: the organization 'Nature and Environment' (a large national NGO) is geared toward conservation of nature, the landscape and some cultural elements in the area; the Deventer Tree-association aims at a green buffer-zone. Some groups stress the cultural and heritage elements in the area, including possibilities for archeology. In some aspects

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<sup>54</sup> Several interviews 2007, 2008

regional bureaus of national ministries are active (ministries for traffic, environmental affairs, and heritage).

The *province of Gelderland*, which was an active opponent in the first stages of the process, has become less active in the recent years, because of limited competences after the border change. It does play a certain role in regional discussions on economic development and in traffic issues, as the province that oversees traffic activities of municipalities to the south of the area (roads that feed into the A1).

## 2.2 Absent actors

In the course of the process many actors have become involved and all have had the opportunity to participate. Therefore it is difficult to substantiate the claim that actors, who should have had reason to participate, were in fact absent. The structure of the issue is such that a clear proposal to develop the area is put to the table, is discussed in the relevant arenas of the representative democracy and is subsequently discussed in arenas where actors can present their opposing or supportive views. In such a situation it comes naturally that primarily those who oppose the proposal have an incentive to become active, for their interests might not be regarded sufficiently otherwise. Those who are in favor of the proposal might think it unnecessary to become active, as their interests are already served by those who take the initiative. Looking at the actors that are involved in the process at the level of citizens and their organizations (who are largely opposing at least parts of the proposal), it could be the case that 'the silent majority' of Deventer citizens (who might be in favor of the economic and social opportunities that the project brings) is absent in the discussion. However, from our current data we have no way of finding out whether such a silent majority exists and what their actual opinions on the project are.

## 2.3 Observed modes of interaction

Since the process under discussion lasts well over 10 years and interaction is taking place in several arenas, there are different modes of interaction to be discerned. Within the Deventer political arenas there is a large majority that is in favor of the project. This majority consists of the coalition parties and they *cooperate* actively with the Board of Mayor and Aldermen. In these arenas there are a few small parties that have taken an oppositional stance from the beginning of the project (Socialist party, green left). However, they have failed to make an impact both at the local and at the national level (during the discussion on the border change in 1999), as they are simply outnumbered when it comes to voting. Outside the direct political arena the actors in favor of the proposal actively cooperate with the province of Overijssel and the local business community.

In spite of this level of cooperation between some actors, the basic mode of interaction is one of *conflict*, although of different levels of intensity. At the start of the project the conflict between proponents and adversaries (mainly Gorssel, Gelderland and the VWE) was quite intense, resulting in legal action against the first decision to change the borders and intense lobbying to national parliament (by both sides of the conflict). Once the inevitability of the border change became clear, the governmental adversaries and Deventer changed to a *bargaining* mode of interaction. Although the conflict as such was not resolved, the actors decided that their interests were best

served by a deal, which secured the adversaries that some of their basic interests were taken care of, whereas the proponents secured that the project was to be developed without further judicial action by the governmental adversaries. The citizen groups were not included in this bargaining process. In spite of the agreement from 1999, hell broke loose when Deventer presented the first version of the plan (*intensive conflict*). This plan was largely developed in solitude by Deventer. At several points this plan was clearly not living up to the promises made in the agreement from 1999 and conflicted with elements of the plan that was discussed in national parliament. After the rejection of the Environmental impact assessment by the national committee, the municipality of Deventer clearly changed its strategy. It started consulting the different parties involved and made some changes that were in accordance with their preferences. This *bargaining* process resulted in a new agreement with Gorssel and at least some more understanding and consideration from the VWE, with regards to the construction of the buffer-zone<sup>55</sup>. At this time the conflict was less intense, but in its basic form still present, as Deventer still aimed at developing the area and the VWE (or individual citizens) still had the intent to prevent this with all possible legal means.

After the small particle issue became clear in its full consequences (2005), the interaction between Deventer and the VWE came almost to a standstill, although there is some regular contact on general issues<sup>56</sup>. The conflict with the water authority has been resolved in a *bargaining* mode of interaction together with the municipality of Lochem. The project regarding water retention that was deemed necessary by the water authority will be developed on Lochem territory and will largely be paid by Deventer. Currently Deventer is developing the project in cooperation with several consultancy firms in order to provide recent knowledge underpinning the proposal. Once the formal procedure will be restarted, the VWE and individual citizens will re-enter the interaction process.

## 2.4 Discourses

In this paragraph we will describe the main storylines in the discourse in the subsequent stages of the process.

As already indicated before, the main storyline behind the project is that Deventer needs additional space in order for its local economy to grow. This is the dominant storyline during the discussion in national parliament considering the border change in 1999. Although there is some discussion on the underpinning of the necessity of the extra space, the general conclusion by both cabinet and parliament is that 'the Deventer economy urgently needs space'<sup>57</sup>. The dominance of this storyline was made possible by an accompanying one considering the social implications of the proposal for the citizens of Epse: 'the citizens of Epse will be protected by a generous buffer-zone'. This additional storyline, which indicated that the citizens had a right to be protected and their rights were duly considered, enabled the majority in parliament to agree with the proposal. Ecological issues did not play such an important role that they could develop into a storyline.

During the discussion on the first draft land-use plan and the first environmental impact assessment (2003), the discursive landscape changed considerably. Several

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<sup>55</sup> VWE nieuwsbrief 30, 2006

<sup>56</sup> VWE nieuwsbrief 32, 2007.

<sup>57</sup> Tweede Kamer, vergaderjaar 1998-1999, nr.2; nr. 5; Handelingen Tweede Kamer, 26-10-1999.

storylines developed. A strong storyline was that Deventer had proven itself to be an 'untrustworthy partner'. This storyline was developed by the municipality of Gorsseel, together with the VWE, through use of the local media and in written and oral reactions<sup>58</sup>. Due to the fact that elements of the proposal were indeed not in accordance with former agreements, Deventer was basically defenseless against this storyline. Due to the changes that Deventer had made, the storyline that the rights of the citizens of Epse were taken care of, was considerably impaired. While the basic economic storyline was still intact in the Deventer political arena, it lost considerable credibility in the public arena because of the decision to use a large part of the area for the new football stadium. If it was true that 'the Deventer economy was so urgently in need for space', why use a large part of the area for the local football team? As a result of the environmental impact assessment, the ecological aspects of the project came much more to the front and became a storyline, to some extent in combination with the claim from the opponents that the ecological implications were not well researched, were not fully taken into account in comparing the alternatives and were thus not fully considered in the decision (which is the formal objective of the environmental impact assessment)<sup>59</sup>. This storyline got a real boost by the rejection of the impact assessment by the national committee. The exact task of the committee was to monitor the quality of the impact assessment and their judgment confirmed the idea that the ecological impacts were not fully considered in the proposal. Added to the procedural faults made by Deventer regarding the organization of the public meeting (which had to be organized at a second occasion), and the delay in producing the impact assessment in the first place, this rejection developed into another storyline: 'Deventer might have gotten it their way regarding the annexation of the area, but since then they made a complete mess of the project'. The occurrence that the original proposal for the border changes was successfully fought by legal action added to this picture, at least in the representation of the discourse in the media<sup>60</sup>, despite the fact that Deventer as a municipality could not be blamed for the procedural mistake made by the province of Overijssel. To put it short, January 2004 the discursive strategy of Deventer to enable the development of the business area was 'in shambles'.

With the development of the new proposal and a new environmental impact assessment, both developed after consultation with important adversaries, Deventer got its discursive strategy back on track. The storyline that the rights of the citizens of Epse were taken care of was provided with new credibility by a new agreement with Gorsseel and a plan for the buffer-zone that was to a considerable extent praised by the VWE (although they still have fundamental objections against the scope of the area to be covered by it). Additionally the interests of citizens living directly west of the area were to be taken care of by an additional zone, made possible by moving the road alongside the area somewhat to the east (into the business area). The economic storyline regained credibility by removal of the plan for the football stadium. However, the economic viability of the project itself is heavily contested by the VWE (to a large extent related to the costs that are to be made in order to make the project both socially and ecologically acceptable). Additional measures were aimed at improving the ecological features of the project. However, the ecological aspects are still heavily contested by the VWE. Because the national committee has not yet tested the second impact assessment, it is not entirely clear whether these ecological improvements are sufficient in order to substantiate the claim by Deventer that the current project is also sustainable from an ecological point of view. However, on a general level it can be concluded that at the time of the public discussions in 2005

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<sup>58</sup> See par. 1.1 and 1.4.

<sup>59</sup> Opmerkingen bij MER bedrijvenpark A1, VWE, 2003.

<sup>60</sup> Stentor, 24-1-2004.



the city of Deventer had successfully regained the initiative in terms of the discourse...

That is, if we disregard the issues related to air quality (small particles and NO<sub>2</sub>)! The air quality discussion introduced an aspect that had been of minor importance in the discussion so far. In the 2003 debate it had been touched upon, but only in the absolute margins of the discussion. To give an impression: in a 95 page document summarizing the public discussion in this period, only one paragraph of 8 lines is dedicated to this subject. This was to change dramatically in 2005, due to the national developments in the air quality discussion and the inescapable conclusion that the project would not qualify the air quality standards that were to be taken into account in a very strict manner<sup>61</sup>. The fact that the project effectively came to a stand-still once this conclusion had become inevitable, shows that even a careful developed discursive strategy can be devastated by one legal provision that is strictly enacted. For Deventer the only short-term strategy was to lick its wounds and join the national storyline in the small particles debate: 'economic and social development in the Netherlands is 'locked' by an unprecedented radical implementation of ecological standards' (see paragraph 0).

After this period the public discourse is reduced to a mere occasional whisper. Deventer was not successful in solving the air quality issues in the short term through the pilot project, but has been successful in settling the water issues with the regional water authority.

### **3 Case specific governance arrangements**

#### **3.1 Governance modes and arrangements**

In this paragraph we will discuss the general governance modes at the local level (first-order governance). Up until now, the governance mode of the *market* has been almost absent in the case. Only in terms of buying the land that is to be used for the business area, there have been some market transactions, which resulted in a situation where 1/3 of the area is owned by the municipality of Deventer and 2/3 is owned by private firms. The market will only become relevant again once the area is ready to be developed, and pieces of land can be sold to firms. However, this future situation does already throw a shadow over current interactions, as it will be in the interest of Deventer to cover most of the costs it is currently making by the sale of the area. In order to raise revenues, it is important that the area is developed in such a way that it is attractive to firms and that the largest possible area can be sold. We can conclude that the market is almost absent in terms of a direct coordination mechanism, but does have an influence on the choices that some actors make (most notably the city of Deventer).

The governance mode of *hierarchy* is highly relevant in this case. The basic decisions concerning the border correction, the land-use planning, the environmental impact assessment and the provisions needed to meet legal standards are unilateral decisions by the local government. In many cases these decisions will be monitored by (bureaus of) higher level government. The standards that have to be met are also set by higher level governance. However, these hierarchical arrangements do come with provisions that give other stakeholders than local government a role in the

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<sup>61</sup> Luchtkwaliteit bedrijvenpark A1 Deventer, Oranjewoud, 2005

process. Stakeholders have rights to be informed in certain stages, they have rights to present their opinions and they have rights to appeal decisions to higher level government and ultimately to the high court for administrative law. These rights operate within the hierarchical governance mode and to some extent the certainty that stakeholders will use their ultimate rights to take the decision to the highest court only increases the importance of the hierarchical mode. Even if Deventer would come to agreements with some actors by bargaining or arguing, individual citizens can still try to get it their way within the hierarchical arrangements provided by law.

This does not imply that *bargaining* and *arguing* modes of governance are absent. On the one hand the hierarchical arrangements, most notably the law on environmental impact assessment, contain numerous provisions that oblige local government to motivate their decisions with substantive information. The specific issues that have to be covered are specified in advance on the case level by the national committee for impact assessment. These provisions imply a need for argumentation on a large number of issues (as indicated before, more than one hundred) and result in numerous reports that underpin the decision and are made available for stakeholder (see also section 4). The argumentation that becomes available in the process forms the basis for a check on validity and possible counterarguments by stakeholders. In this sense this arrangement provides a solid basis for an *arguing* mode of governance, which did develop on a substantial level in the Deventer case. However, it has to be taken into account that the actual decision making remains a matter of the local government within the hierarchical mode: argumentation is only influencing the decision as far as local government is convinced by the argumentation, or is forced to be 'convinced' by higher levels of government in appeal. Therefore the arguing mode of governance is relevant at an intermediate level.

In the process we see some important examples of a *bargaining* mode of governance. This mode is not directly provided by the institutional arrangements, but develops when actors mutually decide they want to use it. Examples are the agreements between Deventer and Gorssel (and the Provinces) and the agreement with the water authority. To some extent there has been bargaining with the VWE and individual citizens living next to the area. For Deventer these deals provide the opportunity to reduce the level of opposition, to reduce the level of counter-argumentation and to show that they take care of vital interests that should be taken into account, according to the rule of law (they strengthen their position in future legal conflicts). For the stakeholders the deals provide the opportunity to heed their interests and to make sure that compromises are reached (which is uncertain in a possible legal action in the hierarchical mode). However, certainly not all issues are resolved in a bargaining mode with all actors, resulting in an intermediate level of importance in this case.

### 3.2 Rules in use

As has been indicated in the previous section, a complex case contains many arenas. In order to understand the institutional context, some differentiation in types of arenas and some abstraction from the day to day process is necessary.

We will start with the central actor in this case, the municipality of Deventer. Because of its central position in the basically hierarchical governance arrangements, we need to discuss what happens 'inside' this actor. As indicated before, there are in fact several arenas within this 'actor', that should be distinguished (see table 1 for a description of the main arenas and their institutional rules). Most formal decisions are eventually taken by the municipal council (MC), where elected councilors discuss and

vote on proposals presented by the Board of Mayor and Aldermen (BMA). However, councilors are elected through a party-list system and they usually decide to support or reject proposals based on party preferences, discussed in party group meetings (PGM) before the actual council meetings. Party groups are to be distinguished between coalition parties (that support and have aldermen in the BMA) and opposition groups. Before proposals are discussed in the BMA, the proposal is developed by public officials in accordance and under the political supervision of the alderman that has the issue in his portfolio. In complex cases (like the business area A1), there will be more than one alderman involved (in this case 3), and many public officials. In complex and lengthy processes, different versions of the proposals and different thematic aspects of the process will go through a cycle of these arenas, although some intermediary decisions are taken by the BMA (for instance the decision to accept a report on air quality as the basis for the proposal).

Table 1: Institutional rules in Dutch local government

Arena	Position rules	Boundary rules	Authority rules	Scope rules	Aggregation rules	Information rules <sup>62</sup>
Politico-Administrative Preparation (PAP)	define the positions of administrators in charge of writing the proposal, administrators who are to be heard and the alderman responsible.	access to the positions of administrators on the basis of expertise and of alderman via election by the council.	administrators have the right to express 'professional' opinion and alderman to express their 'political' opinions.	the result is a <i>proposal</i> , supported by the alderman and the administration, that has to be discussed in a subsequent CMA meeting.	the opinions of administrative staff do count as relevant, but ultimately the alderman decides. If necessary with colleagues	all participants shall have adequate and free access to all relevant information. Information will usually not be available outside the arena
Board of Mayor & Aldermen (BMA)	define the positions of 'members of the board'	access to the positions of members by appointment (mayor) and of alderman by election by the council.	members have the right to express their opinions, only the PAP alderman is initially committed to defend the proposal.	result is <i>proposal</i> , supported by BMA to be discussed in a subsequent CM. In case of rejection a new proposal is to be made in PAP.	BMA 'members' have an equal weight in the collective decision; a simple majority is sufficient for a BMA decision. Mayor's vote breaks ties.	all participants shall have adequate and free access to all relevant information. Information will not be available outside the arena.
Party Group Meetings (PGM)	define the position of 'party group member'.	access to PGM is determined by rules on party membership and electoral laws. Sometimes open to alderman.	members have the right to express opinions (bounded by party platform and for majority coalition agreement).	the result is <i>political support</i> for (or rejection or proposed amendments) the proposal, that is to be discussed in CM.	'members' have an equal weight in the decision and a simple majority ensures a decision on the support for the proposal.	all participants shall have adequate and free access to all relevant information. Information is not available outside the arena.
Council meeting (MC)	define the position of 'council members'	access by party-list based 4 year election	members have the right to express opinions, usually only one party speaker. Right of amendment.	the result is an authoritative decision: acceptance, rejection or accepted with amendments.	one man one vote, simple majority.	all participants shall have adequate and free access to all relevant information. Information will be available to the CM and the public

<sup>62</sup> The *Pay-off rule* that 'cost and benefits are not fixed in advance (are part of the outcome) and are distributed in a way that maximises collective welfare', is the same for all arena's and is for the sake of simplicity not included in this table.

Additional to the basic structure described above we have two types of arenas. As there is no formal decision on the project yet (only decisions on intermediate results), the process in this case-study can be regarded as a prolonged and extensive process developing a proposal (politico administrative preparation in terms of table 1). In this process many actors and many regulations from different thematic laws play a role. We will describe this setting as one (complex) arena, because this is the way in which most stakeholders are confronted with it. We will treat the municipality of Deventer in this description as basically one actor (in table 1 we have indicated how this actor can be analyzed at a lower level of abstraction).

In terms of the entire process, the decisions made by the municipality of Deventer are followed by arenas where higher level government, national committees or administrative courts of appeal discuss and examine these decisions. A full discussion of all these higher level arenas is not possible within the scope of this report. Therefore we will indicate the implications of the existence of these arenas (and their basic rules) by presenting the authority as a position-holder when we describe the arena for the development of proposals.

In the arena we discern a number of positions. These positions are described, with their boundary rules and basic authority rules in table 2.

*Table 2: positions in the general arena, with boundary and authority rules*

Position	Boundary rule	Authority rules
Local government developing the proposal (municipality of Deventer);	Borders defined by national law	Right to prepare and decide on proposals, taking all legal provisions into account, right to buy and sell land
Neighboring municipality (Gorsseel, subsequently Lochem);	Borders defined by national law	Right to prepare and decide on proposals, taking all legal provisions into account on its own territory; act as general stakeholder
General stakeholder (citizen or group that is affected by the proposal);	Any natural or legal person that is affected by the project to be developed	Any stakeholder can enter meetings and opportunities for discussion, voice opinion and appeal decisions
Stakeholder holding thematic governmental competences (for instance water authority);	Boundary rule dependent on competences provided by law (water board by specific law)	Right to use specified competences
Higher level governmental body (province of Overijssel);	Borders defined by national law	Right to examine (and reject) decision on land-use in first instance; develop own economic, social and environmental policy
National committee on environmental impact assessment;	Members appointed by national minister for the environment, based on expertise	Right to advice on knowledge to be used in the impact assessment, right to examine (and reject) impact assessment
Court on administrative law	Members appointed by cabinet, based on expertise	Right to examine (and reject) decision on use of administrative procedures
Professional expert	Qualified by education and organizational position	Right to collect, analyze and specify knowledge that is acceptable in formal procedures

The basic *aggregation* rule for the arena is simple: most decisions are taken by the municipality, although the land-use plan needs explicit approval of the Province. However, decisions have to be made in accordance with the substantial provisions of relevant thematic laws (see scope rules) and the process has to be in accordance with the procedural regulations of these laws. This implies that proposals and decisions have to be motivated (see information rules) and stakeholders have to be given the opportunity to react to proposals in meetings and in written statements.

The *substantial scope rules* stem from different thematic laws and contain numerous provisions in terms of amongst others air quality (for instance PM10 and NO2), water and soil quality, noise, landscape, nature and heritage. Stakeholders can take decisions to the administrative court when they have the opinion that these provisions are not met. The *procedural scope rules* contain provisions that courts can reverse decisions and oblige the municipality to amend the decision.

The legal rules contain numerous provisions that can be labeled as *information rules*. Naturally, the law on environmental impact assessment contains many examples, as the entire object of the law is to ensure that comprehensive information on environmental impacts of proposals is collected, discussed in public and regarded in the decision process. The thematic laws that apply to the case (air, water, noise etc.) also contain numerous examples of rules that specify which information has to be collected, which models have to be used and what qualifications have to be met.

The general *payoff rule* states that Deventer will pay for the development of the area and will receive the benefits from selling the land (unless private firms own the land and are given the opportunity to develop parts of the area). The costs include not only the costs of creating the physical infrastructure for the area, but also the costs of the process, which have grown to substantial size, given the length of the procedure and the administrative capacity that has been used (both from within the municipality and in the form of hired expertise). Costs of meetings are covered by Deventer. Stakeholders and other participants have to bear their own costs during the process in terms of personnel and own facilities. All actors bear their own costs and benefits that are related to the consequences of the project when it has been build (both convenience like jobs and economic growth, and inconvenience in social and ecological effects). However, measures to alleviate the negative consequences that are taken in relation to the relevant regulations have to be paid for by Deventer. In some cases a specification of this rule is part of the agreements made (with Gorssel and with the water authority/Lochem)<sup>63</sup>.

### 3.3 Changes in arrangements and rules

The basic institutional rules remain unchanged in the period discussed. However, details change and sometimes 'the devil is in the details'. Obviously, the changing regulations concerning air quality, in combination with the strict interpretation by the high court, changed the situation drastically. In the near future these regulations will change again, providing Deventer with new options for developing the plan (see section 1). The level to which the bargaining mode is used in the process is more volatile, because it is not directly related to stable legal regulations, but dependent on the mutual will of the participants. This will can change instantly, when actors have the idea that they are dealing with untrustworthy partners (as was the case in 2003, in relation to the first land-use plan). However, by making agreements the actors concerned create new rules that can be used by the actors themselves and by other stakeholders. In this sense the agreements between the cities of Deventer and Gorssel have provided additional substantial scope rules concerning the buffer-zone, the type of industrial activities allowed (in terms of environmental impact) and the types of buildings that were allowed. They also created procedural rules, as the cities agreed to develop a common plan for the buffer-zone and Gorssel accepted the business area (thereby relinquishing the right to appeal).

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<sup>63</sup> Bestuursaccord tussen de gemeenten Gorssel en Deventer inzake de ontwikkeling van een bedrijventerrein nabij Epse, september 1999, including addition in 2004.

## 4 Case specific knowledge scapes

### 4.1 Dominant knowledge forms

In this paragraph we will discuss the relevance and dominance of knowledge forms, ordered by the three knowledge domains (for reflexive knowledge see par. 4.5).

In the *science research and expert domain*, we have two knowledge forms. One is among the two dominant knowledge forms (expert/professional knowledge), the other is practically irrelevant (*product knowledge*, level 0). To start with the latter: the issue is not so much on products, but on the necessity and consequences of economic activities that produce different products. Therefore, there is little discussion on the characteristics of these products as such. Some knowledge of products used in economic activities and possible mitigating measures is relevant: what are the emission factors of cars that will be used in traffic, or what are the mitigating effects of a screen on noise levels in the area? However, in the arena these characteristics are only relevant through the expert/professional knowledge that is to be used in accordance with the information rules provided by the different regulations. In most cases this means that some kind of scientific/professional mathematical model is used to calculate expected emissions and projected noise levels.

By this we come to the dominant form of *expert/professional knowledge* (level 3). In line with the information provisions described in the information rules, knowledge has to be provided on numerous issues. This results in a vast number of reports containing an enormous amount of expert/professional knowledge. To give an impression, in the discussion on the second land use plan and environmental impact assessment (2005) the following documents were relevant and could be commented upon:

- The environmental impact assessment 2005;
- Specific guidelines for the assessment;
- Draft visual quality plan;
- Draft city-development plan;
- Draft request higher noise levels;
- Draft land-use plan;
- Memo on intensive land-use;
- Study on traffic issues;
- Study on noise levels;
- Study on air quality;
- Study on risk in water management;
- Plan for the buffer-zone;
- Study on natural values and landscape;
- Economic analysis of locations for business areas;
- Archeological study;
- Study on soil quality.

The dominant knowledge form in these documents is expert/professional, as the knowledge has to comply to standards set in the legal provisions in order to provide knowledge claims that are to be accepted in legal procedures. Much of the knowledge has a general character, but some knowledge of the local situation is needed in order to use the general models. However, even this knowledge of the

situation is a form of professional knowledge, as it also has to comply with professional standards. The knowledge used in the study on air quality can be described as an example. In the air quality study, the actual situation in terms of levels of PM<sub>10</sub> and NO<sub>2</sub> is described and future levels are predicted, using a professional model that is certified by the ministry<sup>64</sup>. This model uses data on current background levels (based on national estimations) and estimates current levels for different roads using car emission factors and estimations of traffic intensity based on actual measurements of car movements in the city. Based on predictions of future car movements and future emission factors for cars, predictions for future levels of PM<sub>10</sub> and NO<sub>2</sub> can be generated (in combination with predictions of future background levels). With this one can indicate whether the air quality standards are likely to be met in the future.

The importance of expert/professional knowledge is so high that we can conclude that the entire science, research and expert domain is dominant as well, despite the fact that product knowledge is almost not relevant.

In the *policy and governance domain* we see a mixed picture of relevance of knowledge forms. *Steering knowledge* is of limited relevance in the case (level 1). The aldermen and project leader in the municipality of Deventer need substantial steering knowledge to guide a complex process like this (which has proven to be difficult on a few occasions) and in terms of external relations the bargaining processes with stakeholders can only be concluded when actors are aware of the basic rules of negotiation and are able to apply them in the right situation.

*Market/economic knowledge* is somewhat more relevant (level 1-2). Market knowledge is important in the sense that the economic viability of the project itself is dependent on the demand for land on the market for business area once the project is realized. For Deventer it is important that the area will be attractive when it is on the market, because this will cover their costs and will attract the economic activity they hope for. Thus knowledge on what constitutes an attractive business area is of high relevance. For the opposing actors, reducing the economic viability of the project is an important strategy (by making the project more expensive, by limiting types of economic activities and reducing the amount of land to be sold). So for them these basic forms of market knowledge are also important (though the knowledge as such is rather simple in its structure). A second form of economic knowledge that is of relevance is knowledge on the economic necessity of the project. This is the knowledge that can underpin the storyline that 'Deventer urgently needs an additional business area for its economy to grow'. On the one hand this knowledge can be qualified as 'economic knowledge', but given the centrality of this claim in the debate, the knowledge also has to be of the expert/professional type in order to be used successfully. During the process we see that this knowledge is used in the form of research and reports by professional experts. This is in line with the general dominance of this knowledge form.

*Institutional knowledge* is the second form of knowledge that is dominant in this case (level 3). This knowledge comes in two versions. First there is the knowledge of the content and implications of all the regulations that are relevant in the case. These rules are complex, comprehensive and highly relevant, to some extent because the nature of the conflict ensures that opponents of the project will use any legal opportunity at hand. A mistake in terms of these rules can be devastating for the project and thus adequate knowledge of the rules is essential to all actors involved. Actors spend time and other resources (budgets) in order to collect this knowledge, in many cases through legal experts. A second version is knowledge on current and future policies that are relevant for the project. These policies contain general guidelines and deliberations that have implications for the project, but are not directly

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<sup>64</sup> Luchtkwaliteit Bedrijvenpark A1, Oranjewoud, 2005

binding, so they do not qualify as 'institutions'. Examples of knowledge of this kind are general guidelines in national economic and planning policy, regional and local economic policies and changes in policies that are expected in the near future. This kind of knowledge is used to claim that the project does (or does not, in case of the opponents) fit within the general policies concerning a certain topic. To give an example: the suitability of the project in terms of current economic and planning policies is extensively described in 5 pages of the land-use plan<sup>65</sup>.

The relevance of the policy and governance domain as a whole is to be set at level 3, because of the dominance of the institutional knowledge.

The *life world domain* is clearly of less importance than the other domains (level 1). *Milieu knowledge* is of some importance (level 1), in as far as it refers to the way in which policies are developed in the Deventer political arena. This is almost 'every day' knowledge for those regularly involved in the arenas (local politicians and public officials) and is a combination of institutional and local knowledge for the other actors. This knowledge has some relevance in the informal processes of arguing and in the collection of (other forms of) knowledge. Relevant *every day knowledge* (level 1) is knowledge on what the values of the current landscape are and what the social inconveniences will be when the project is realized (noise, visual limitations, traffic jams). This knowledge plays a role in the preferences of the opponents against the project (and is voiced in the arena), but in the process this knowledge can only have an impact when it is translated into relevant forms of expert and institutional knowledge. *Local knowledge* has also some relevance (level 1), but mainly as input in general forms of expert/professional and institutional knowledge. It is nice to know that certain animals live in the area, but they only contain a valid argument against the project when they are protected by some kind of regulation. The dominant argument against claims from the life world domain is that the basic 'sound' economic storyline in favor of the project includes the idea that some individual sacrifices have to be made in order to realize collective economic and social benefits.

## 4.2 Knowledge holders

All actors that are involved in the process are, in one way or another, holders of knowledge. We will describe the most relevant features.

The municipality of Deventer is the knowledge holder that is of primary interest. It holds knowledge through its public officials (expert/professional, market/economic, institutional, steering, local), the aldermen (steering, institutional, milieu, local) and politicians (institutional, milieu, local, every day). Additionally, it hired expert/professional and institutional knowledge from different professional organizations. To list the most important:

- Buck (economic analysis);
- Oranjewoud (first impact assessment and land-use plan, air quality);
- Arcadis (second impact assessment, city development and visual plan);
- Amer (second land-use plan);
- Tauw (general air quality/traffic);
- Vista (buffer-zone plan);

In these companies teams of professionals with different expertise work on the project. The number of hired knowledge holders is related to the enormous amount of knowledge that is relevant due to the information rules (that require specialist

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<sup>65</sup> Ontwerp bestemmingsplan bedrijvenpark A1 Deventer, Amer, 2005, pages 3-8.



knowledge) and the fact that developing a complex process like this is not a 'standard operating procedure' for a city like Deventer, but a complex project that is run incidentally. In some cases these knowledge holders even had to subcontract specialist knowledge holders from other firms, because for instance specialized computer software used in air quality predictions is so expensive that only a few companies in the Netherlands use them<sup>66</sup>.

Compared to the 'army of experts' of Deventer, the number of knowledge holders in Gorssel/Lochem is particularly small, most notably in the categories of public officials and hired experts. Expert knowledge remains at a fairly general level, institutional knowledge is generally available and to some extent hired (legal knowledge). Knowledge holders have high levels of knowledge in the life world domain.

The stakeholders that hold thematic or general legal competences (water authority, provinces, regional bureaus of ministries) employ professional experts that have high levels of expert/professional and institutional knowledge. The stakeholders that are thematic NGO's have specific institutional knowledge, local knowledge and even some expert/professional knowledge.

The citizens' association VWE is a voluntary organization that has to rely on the combined knowledge of its members. However, in the VWE case this knowledge is very substantial and spoken of with due respect in the professional circles of the Deventer administration<sup>67</sup>. The VWE has a group of about 20 active members that have high levels of knowledge in the life world domain. Within this group about 10 members have expert/professional, institutional and market/economic knowledge in different fields of expertise. They have this knowledge from the jobs they have in their professional life. Most of these professionals are living in Epse area, but some are known through personal relations of members of the board of the VWE. Some live in an entirely different part of the country, but own a holiday residence in the area. The VWE hired specialist institutional knowledge from a legal expert. An important strategy of the VWE in terms of knowledge is collecting it by consulting organizations that have expert/professional and institutional knowledge and by collecting it from documents and internet. In this way some members have become knowledge holders during the process.

Individual citizens mostly have knowledge that is limited to the life world domain, however some have hired legal experts.

### **4.3 Social/spatial distribution of knowledge**

It is obvious that the social/spatial distribution of knowledge between the cities of Deventer and Gorssel is not balanced. However, it has to be taken into consideration that their task in terms of 'knowledge management' is also of an entirely different order. Deventer is the city developing the project and it is their task to comply with all the information provisions in the regulations. This implies that they have to collect, analyze and present this information in such a way that opponents are not able to point successfully to knowledge deficits in legal procedures. For the collective of opponents the task is considerably less complex: find the blank spots, faults or contradictions in the knowledge provided by Deventer and use them in the process. For the opponents it doesn't matter which of them is successful in finding knowledge

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<sup>66</sup> Interview 17-1-2008.

<sup>67</sup> Interviews 5-11-2007, 17-1-2008.

deficits in the proposal, as long as one of them is successful. In this sense the collective knowledge of the opponents has an additive character, even without coordination, whereas the knowledge strategy of Deventer has to be tightly coordinated in order to be effective. Or to use an image: Deventer has the task of successfully lancing a rocket based nuclear warhead, whereas the opponents can shoot from the hips with hail, machineguns and the like<sup>68</sup>.

The VWE has clearly less knowledge than the city of Deventer, but an important strength is their possibility to form knowledge coalitions with other opponents (including stakeholders that hold formal competencies like the regional water authority and Gorssel). The joint forces of the knowledge holders form a considerable 'strike force' in their battle against the project. Although we indicated above that these forces do not have to be fully coordinated, the VWE faces another strategic problem at times when formal hearings are organized: it is confronted with a huge amount of information (see 4.1) and has to react in a short period of time (usually 4 to 6 weeks). This results in a high level of *information overload* in this time span, that can only be resolved by constructing 'reading-groups' with a specific division of labor<sup>69</sup>. The city of Deventer is setting the pace in the procedure and thus can decide the timing of its activities in relation to its information processing capacity. However, this does not imply that Deventer has no problems concerning information overload. In the 2000-2005 period Deventer wanted to realize the project as quickly as possible and the enormous amount of information that has to be processed and coordinated is creating information overload anyway.

#### 4.4 Excluded knowledge forms

On a general level it can be stated that all knowledge forms are present in this case, even to a level where we can observe knowledge (information) overload. The presence of all knowledge forms and their admission to the arena is clearly related to the information rules of the institutional arrangement. These arrangements also specify in which way knowledge has to be collected and which information will suffice in order to come to legitimate conclusions (that is to say, legitimate in the legal procedures). For a number of ecological indicators this implied that the indicators are not collected on site (providing local knowledge), but are calculated using scientific mathematical models. In paragraph 4.1 we already described the use of such models in the air quality issues, but the same holds particularly for noise issues and some issues concerning quantitative water management. This implies that no actual measurements in the area are made concerning issues like air quality and noise. In this sense professional local knowledge is not collected, because it is deemed irrelevant in the process. Even if Deventer would provide actual measurements that would indicate that it *is* meeting air quality standards, it would still loose in a legal procedure, because only the estimations provided by the model can produce knowledge claims that can be used by the judges (and these model estimations indicate that standards are *not* met). Naturally, the same holds for opponents: for them it is useless to provide actual data that would prove that noise levels are not met, whereas model estimates show that they are.

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<sup>68</sup> Interview with VWE 16-1-2008.

<sup>69</sup> Interview 16-1-2008.

## 4.5 Relevance of reflexive knowledge

On a general level, the interactions in this case are antagonistic and (thus) dominated by legalistic institutional knowledge. This implies that instances of reflexive knowledge are scarce. Knowledge holders have a general tendency to stick to their own opinions and definitions of the situation. Arguments made by opponents are filtered by a critical lens and sometimes viewed with distrust.

However, in the case we can distinguish three forms of reflexive knowledge. The first one can be labeled as *'forced reflexivity'* and is induced by institutional knowledge and expert/professional knowledge combined with some local knowledge. In some instances the stakeholders had to admit that they were confronted with 'institutional facts' that they had to acknowledge and take into account. This changed their opinions in a number of instances. Examples are: the acknowledgement of the city of Gorssel that the border correction *would* take place (and that they better start negotiating on the conditions under which the business area was to be build), the acknowledgement by the city of Deventer that they had 'overplayed their hand' in the 2003 proposal (and better come with some major improvements in their proposal in order to not endanger the entire project) and the acknowledgement that the 2005 proposal was not meeting legal air quality standards (and thus the project either needed a fundamental reconsideration or at least a temporal halt, hoping that the problems would 'vanish into air' by changes in the standards or the estimated pollution levels).

A second form of reflexive knowledge can be labeled as *'induced reflexivity'*. It is to be found in bargaining situations where different actors (have to) admit that opposing knowledge claims are strong enough to be taken into consideration. One example is a situation where the actors can bring relevant institutional competences to the arena, combined with expert/professional knowledge. A concrete example is the bargaining process between the city of Deventer and the regional water authority concerning water retention management. A strong bargaining situation can also be induced by a strong position in the public discourse. The citizens living along the road to the west of the area will be clearly affected by increased traffic congestion, and their knowledge claims were rather brutally pushed aside in the 2003 proposal.<sup>70</sup> Together with the impression that Deventer was not living up to the former agreements that they had made to protect the citizens from inconveniences, this created a situation where the citizens could claim a strong position in the public discourse. This resulted not only in a bargaining strategy by Deventer, but also in a situation where the citizens could make a strong case for their own claims.

The third form of reflexive knowledge can be labeled *'argumentative reflexivity'*. This is perhaps the most 'pure' form of reflexivity, where arguments are shared in an open debate, reflected upon, taken into consideration and result in new knowledge for the knowledge holders. Examples of this form of knowledge can be found in the process of designing the current plan for the buffer-zone between the business area and the village of Epse. Citizen groups were directly involved in consultation with the hired professional experts that were designing the plan. As these were professional experts in designing ecological areas (not in designing industrial areas), their professional knowledge claims were very much in line with the every day and local knowledge claims from the citizens. This facilitated mutual learning and cooperation.

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<sup>70</sup> The proposal simply stated that the noise shield that these citizens preferred was 'not acceptable from a city-development perspective', ...

## 4.6 Synergies and contradictions between knowledge forms

Given the institutional arrangements, it will come as no surprise that the main synergy between knowledge forms is the one between the two dominant forms: expert/professional and institutional (see also 5.1). Within the sphere of institutional knowledge there is a large demand for settlement of possibly contradictory knowledge claims, which is provided by expert knowledge. This expert knowledge is to be regarded as 'authoritative', as least within the domain of the legal procedures. This does not imply that claims from the other knowledge forms are regarded as 'untrue', but as far as the legal procedures are involved they will only have an impact to the extent that they can be translated into relevant institutional and expert/professional knowledge. Hence we see that market/economic knowledge enters the debate in expert/professional forms and local knowledge is used as input in institutional argumentations.

This does not mean that other forms of knowledge are totally discarded: they are brought to the table by citizens and politicians in their argumentations in respective arenas. Their influence is however dependent on the informal processes of argumentation and bargaining that actors choose to develop alongside the formal institutional procedures. As has been indicated in paragraphs 2.3 and 3.1, these informal processes have been important in this case at some stages and they have had an impact on the proposals as they stand today. Local and everyday knowledge have played a role in the design of the buffer-zone, the design of the eco-zone of the 'Dortherbeek' brook and the plan to move the westerly road somewhat to the east (to enable a second buffer-zone).

The synergies and contradictions we have described above are at the level of the structure of the knowledge *forms*. In terms of the substantive content of the knowledge claims there are numerous synergies and contradictions, also within the different knowledge forms. Conflicting knowledge claims on this *substantive level* are first and foremost related to the different consequences that the envisaged economic activities have for the economic, social and ecological dimensions of sustainability. Hence an activity that increases economic growth and employment (social sustainability) will also increase inconvenience and emissions of pollutants to the air (and thus decrease social and ecological sustainability). These claims can all be substantiated within the expert/professional knowledge form. Conflicting claims are not only related to the economic activities as such, but also related to the measures that are proposed to alleviate non-sustainable consequences of these activities. As an example: additional measures to clean an area of contaminated soil will result in additional costs and will thus threaten the economic viability of the project (and may reduce budgets available for the buffer-zone in another part of the area).

On a more concrete level there are numerous examples of conflicts between the major storylines in the debate: 'Deventer needs additional space for economic development', 'Citizens in the area have to be protected' and 'the project has to be ecological sustainable'.

## 4.7 Knowledge deficits

Although we already indicated that the process would rather show examples of knowledge (information) overload, than of major knowledge deficits, we can state some instances of information deficits. The first instance is in the 2003 period of the process, where citizens and other stakeholders claimed that insufficient knowledge was collected. In this situation this claim of insufficient knowledge was even

substantiated by the national committee on environmental impact assessment. Many of these deficits have been addressed in the next stage of the process. During the 2005 period there were additional claims of lacking knowledge, but because the formal procedure has been on a halt we have no formal assessment of this claim. What makes it difficult to assess these claims is that they can be used by the stakeholders in a strategic way: asking for additional knowledge to be collected will increase the effort to be made by the city of Deventer and will decrease the economic viability of the project by increasing its costs (see also 5.2).

The *strategic use of information* refers to a second form of knowledge deficit: actors might actively withhold knowledge they have in order to use it at a time and in an arena that suits them best. If the VWE is convinced that the current version of the buffer-zone is not in line with the agreement made alongside the border change (1999), they can fiercely point to this issue (which they have done) and give Deventer the opportunity to amend its proposal to become more in line with the agreement. They can also decide to be not too insisting on this issue (hoping the proposal is not amended) and use the argument in the formal legal procedure in an attempt to block the project once again by legal means. From the interviews it can be concluded that deliberations of these kind have been made by both parties, but at the general level it appears that most issues have been brought to the table<sup>71</sup>. This might also be related to the fact that objections stated in the formal procedure can only be successful if they have been already stated in the public arena (in order for other stakeholders to be able to react to those objections).

A third element of knowledge deficit that we would like to draw attention to is related to the *quality of knowledge*. As has been described, mathematical models play an important role in the knowledge production in the realms of air quality. Studies on the national level indicated that the estimations and predictions that are made with these models have considerable error margins and thus reflect high levels of *uncertainty*<sup>72</sup>. As a general conclusion this report from the authoritative research organization on the issue states that: current estimations of background level of PM10 have an uncertainty level of 15%-30%, future predictions of background levels have a level of 30% and specific predictions for levels at specific streets have an uncertainty level of 45%! These predictions for specific streets are the ones to be used in the assessment procedure deciding whether the project will meet air quality standards or not. This implies that the uncertainties of the predictions are particularly high in relation to the level that the standards are exceeded. In a situation where no actual measurements on PM10 levels are available, these uncertainties reflect a considerable knowledge deficit.

## 4.8 Changes in knowledge formation

In terms of the overall structure of domination of expert/professional and institutional knowledge there are no changes during the process. The role of knowledge from the life world domain becomes important in the development of the 2005 proposal, in concordance with arguing and bargaining modes of governance. A major change in the knowledge formation in terms of relevant issues is due to the change in air quality standards (and their strict implementation) in 2005. Knowledge on air quality became of the highest relevance, whereas before it constituted only a minor issue.

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<sup>71</sup> Of course it has to be acknowledged that an actor that is really using this strategy will also not reveal this in an interview.

<sup>72</sup> PM10 in Nederland. Rekenmethodiek, concentraties en onzekerheden, MNP 2006.

It has been indicated that expert/professional models play an important role in some issues and that levels of uncertainty are high. This implies that changes in the (parameters of the) models used, result in major changes in 'measurements' indicating whether standards are met or not. The 2005 report on air quality indicated that major problems were found in the PM10 sphere, with the prediction that at some roads the daily standards were expected to be exceeded on as many as 75 days (maximum in standard is 35 days). In a 2006 report on air quality in Deventer the maximum expected days exceeding the standards were reduced to 46<sup>73</sup>, whereas model predictions in 2007 indicated that all roads will meet PM10 standards<sup>74</sup>. These changes in predictions are not related to additional measures that are taken in relation to the project, but they stem from new national estimations of background levels (including subtraction of sea salt) and new (lower) emission factors for cars in the models.

## ***5 Interaction between knowledge and governance arrangements***

### **5.1 Synergies and contradictions between governance and knowledge forms**

After what we already indicated in the previous sections it will come as no surprise that the main synergy that can be seen in this case is the one between the basically hierarchical governance mode and the dominance of expert/professional and institutional knowledge. The institutional rules prescribe both form and content of knowledge to be used and they determine that only these types of knowledge claims (expert and institutional) will be successful in the legal procedures. As part of the specific regulations some local knowledge is defined as obligatory (for instance data on traffic to be used in air quality models), whereas other local knowledge is deemed irrelevant (actual measurements of PM<sub>10</sub> and NO<sub>2</sub>).

Regarding the other forms of knowledge the role of the institutional rules is mixed. On the one hand it is the case that knowledge forms that can *not* be translated into expert/professional or institutional knowledge are useless in the legal procedures and can only make an impact through the arguing and bargaining modes of governance that occur occasionally. On the other hand the regulations *do* create situations and arenas where argumentation and bargaining can develop (public meetings, general obligations to collect and share information). Without these provisions the knowledge forms from the life world domain would certainly have more difficulty in finding their way into the arenas.

## **5.2 Relations between modes of interaction and knowledge forms**

The modes of interaction are certainly relevant for the importance and impact of different knowledge forms. The dominance of expert/profession and institutional knowledge is not only related to the institutional setting (5.1), but is increased by the

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<sup>73</sup> Actieplan verbetering luchtkwaliteit Deventer 2006-2010, Tauw, 2006

<sup>74</sup> Interview, 17-1-2008.

dominant conflicting nature of the issue and the subsequent adversary interactions between the stakeholders. Once it became a certainty that opponents would always use all legal means at hand to block the project, the city of Deventer was sure that it would not come away with any violation of the formal information rules. This contributes clearly to the dominance of the expert/professional and institutional knowledge forms. Within this context it is also not very attractive to Deventer to take measures providing additional levels of sustainability beyond what is obliged by the institutional rules. In a bargaining situation a compromise with stakeholders (additional to what is legally obliged) might refrain them from taking legal action.

Previously we have already indicated that some instances of bargaining and arguing can be seen in the process, including less adversary interactions that enabled knowledge from the life world domain to have an influence on the proposals made.

### **5.3 Governance arrangements, knowledge forms and learning**

To what extent have the combinations of arrangements and knowledge forms resulted in learning? The strict and comprehensive information rules have certainly resulted in acquiring additional knowledge and new insights within the expert/professional and institutional domain, including the translation of other knowledge forms into these dominant forms. Without this arrangement the decision making process would have been less informed and stakeholders would have been less informed on relevant issues (and thus would have been less able to develop argumentations pro and contra aspects of the proposals). The arrangements also create an arena in which Deventer has to take the preferences of stakeholders seriously, especially of those stakeholders that have specific legal competences. Furthermore, the arrangements have been extended somewhat by formal agreements between some stakeholders, providing them with additional mechanisms to ensure that their knowledge is taken into account.

There are two exceptions to this general picture. One is the role that the institutional setting plays in reducing the role of uncertainty in using mathematical models on air quality and noise. We have already indicated that uncertainty levels can be as high as 45% on issues concerning street level standards (4.7). Within the formal legal arrangement there is no room for such uncertainties to be taken into account and properly assessed. In the legal procedure the model predicts certain point estimates of PM<sub>10</sub> levels and these estimates are considered to be an adequate indication of the true values in the situation. Once the model is accepted as the only means of producing legally adequate knowledge of the situation, the discussion focuses on the model predictions rather than on the actual levels of PM<sub>10</sub> and 'learning more' on these actual levels has become irrelevant (and is thus not happening). Although this situation is perceived by all stakeholders as peculiar and odd, it is nevertheless accepted as 'an institutional fact of life'. The appreciation of this situation depends highly on the implication of the model estimations for the project. During the 2005-2007 period the Deventer actors felt frustrated by the fact that exceeding the standards with even small amounts could be the result of point estimates with such high levels of uncertainty (believing that actual levels could be much lower)<sup>75</sup>. In the future situation (where the model estimates that standards are met for PM<sub>10</sub>), the

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<sup>75</sup> And perhaps discarding the possibility that this uncertainty could also indicate a situation where actual levels were much higher than estimated.

adversaries of the project might feel that the model has been changed in such a way that the outcomes 'were set to meet the standards'<sup>76</sup>.

A second example of a limiting influence of the governance arrangements on possibilities for learning concerns the drastic impact of exceeding the air quality standards on the project. As has been described before, in the context of the unique Dutch implications of the standards for procedure of land-use planning, projects like the Deventer business area A1 came to a full stop once they exceeded the standards. In a situation where the proponents of the project perceived they had no viable options to reduce PM<sub>10</sub> and NO<sub>2</sub> levels to meet the standards, they also stopped taking options into consideration that might have reduced levels to some extent (though not far enough to meet the standards). These options (like creating an environmental zone in the city, prohibiting vehicles with high emissions, or investing substantially in public transport) were taken into consideration at some point, but were discarded from future deliberations when it became apparent their effect was not enough to meet the standards (and thus enable the city to develop the project)<sup>77</sup>. Thus, this 'all or nothing' character of the regulation prevents changes in proposals (learning) that are ecological beneficial, but not enough to meet the standards. In very much the same way it can be predicted that in the current situation (where model estimates indicate that PM<sub>10</sub> standards *are* met), the entire PM10 issue will disappear from the agenda and no measures regarding its possible reduction will be considered anymore, at least until the next set of standards concerning PM<sub>2,5</sub> will become effective.

## **6 Governance for sustainability**

### **6.1 Sustainability of the project**

The sustainability of the project can first be assessed using the substantial dimensions of sustainability as criteria. From the *economic* dimension it can be claimed that there is indeed a large demand for business areas of the kind proposed in Deventer (along a strategically important transport route). Within the city of Deventer this location is indeed suitable for business development, attracting firms that have a wider range of activities than only the local economy. The economic viability of the project is however highly disputed. The costs of developing the area have risen to substantial amounts, not only due to the strenuous and lengthy process, but also due to the measures that are necessary to alleviate the possible negative effects of the project in terms of the social and ecological dimensions. The buffer-zone in the south, the additional buffer-zone and road reconstruction in the west, the eastern traffic infrastructure (a tunnel under the current railway) and the solutions for the water issues are particularly expensive and do not result as such in higher economic value of the property. The ecological limits to the activities in the area are rather strict, and imply that not all economic activities are allowed. All in all, the project seems to be only moderately sustainable from an economic point of view.

From a *social* point of view the project is likely to develop additional employment in the city of Deventer and possibly the neighboring cities. The level of inconvenience that the project creates for the citizens living in and along the area is

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<sup>76</sup> And perhaps discarding the possibility that the predictions from the model that triggered the much welcomed halt of the project in the 2005-2007 period were the result of inadequacies of the model estimates.

<sup>77</sup> Interview 17-1-2008.



considerable, but is also considerably reduced by the alleviating measures taken. Naturally, the social implications for the citizens living in the area and inside the buffer-zone are still considerable, even including the alleviating measures. The social dimension that is not taken care of by additional measures is the expected increase in traffic congestion on the road located west of the project. This road is already heavily congested and no immediate measures are proposed. All in all, this results in moderate sustainability on the social dimension.

From the ecological dimension it can be claimed that the basic structure of the project is not sustainable: an area in use for agricultural activities is transformed into a build environment, allowing economic activities that produce additional negative ecological effects (emissions to air, use of energy, noise, light, loss of water retention capacity). However, some of the alleviating measures reduce the ecological imprint of the project, and only economic activities with limited ecological effects will be allowed in the area (categories 1-3 on a 6 point scale). In terms of the sustainability of the economic activity it is noteworthy that all firms will have to apply to the most recent standards, which will imply that they are more sustainable than counterparts that had to apply with standards from the past. However, no specific economic activities or projects are envisaged that go beyond what is to be expected within current legislation (a proposal regarding wind energy has been considered, but disposed off, partly due to its social consequences and no additional sustainable energy projects or emission standards are considered). All in all, the project is moderately unsustainable from an ecological point of view.

In terms of the procedural criteria, the *comprehensiveness* of the process in terms of sustainability is without question high (level 3). All possible consequences in terms of the economic, social and ecological aspects of the project have been discussed and assessed. Both from the extensive analysis of relevant documents and from the utterances of relevant actors in both documents and interview this conclusion is inevitable.

In terms of the *aggregation* criterion the question is whether an integrated perspective has been used evaluating the different cross sectional concerns. In terms of the perspectives that the different actors have been using, the perspectives have been rather selective in the first stage of the project (level 1). In the 2003 proposal, the city of Deventer used a rather unilateral economic perspective, discarding important social and ecological aspect and even violating specific agreements it had made with important stakeholders. The opponents are using arguments relating to all substantial issues, but consistently use only arguments that relate to negative consequences of the project, introduce new consequences to be researched and imply alleviating measure that undermine the economic viability of the project. In this period the level of aggregation is low. Around the 2005 proposal the perspectives used by Deventer have become more integrated, to some extent due to the fact that their former discursive strategy was in shambles (2.4). By taking a more integrated perspective they were able to improve their position. However, the basic perspective is still dominated by economic concerns: some additional measures that would improve the social and ecological sustainability are not chosen in order to save the economic viability of the project<sup>78</sup>. The VWE as main adversaries have cooperated in this period in designing major elements of improvement (buffer-zones), but they will persist in their attempts to prevent the project from ever being implemented, and will consequently use a rather selective perspective. All in all the level can be set at 2 in this period of the project. This level is still applicable in the current situation. Based on the statements of the actors, the proponents perceive the level of aggregation somewhat higher than the opponents, but on average a level 2 score would also apply.

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<sup>78</sup> Raadsvoorstel aanvaardbaarheidsoordeel MER bedrijvenpark A1, 25-1-2005.

The *consistency* criterion refers to the question whether the various elements of the policy proposal are in accord and to the consistencies of the knowledge structures (beliefs) of the different actors. The complex structure of the project, with contradictory consequences in terms of the substantial dimensions of sustainability, result in low values of consistency (1). As has been indicated when describing the sustainability on the substantial dimensions above, choices made and measures taken to improve one of the dimensions (for instance the ecological), usually have negative effects in terms of other dimensions (for instance the economic viability). Measures that could be taken to improve air quality (in terms of strict regulations concerning traffic), would conflict with the primary 'raison d'être' of the project: a business area that is strategically located at one of the major European highways. In this sense the actors are trapped in something like a 'catch 22' situation: in order to meet all dimensions of sustainability (at least to some extent), a complex and necessary inconsistent proposal had to be developed. Some inconsistencies are also present in the beliefs and strategies of the actors. The Deventer approach was rather consistent at the start (go for an economic viable project), but became less consistent (though more balanced) under the different pressures in the process. The VWE as the major opposing stakeholder face also a basic strategic inconsistency in the choice between fighting the project with all possible means (without bargaining any compromise with Deventer) and negotiating about a better proposal that reflects at least some of their preferences. The first is an 'all or nothing' strategy, the second has the advantage of gaining some influence, but will clearly contribute to the chances that the project will become a reality. The actual strategy chosen is some sort of compromise between these strategies: some cooperation and negotiation, but they have also indicated that they will still use any resulting discrepancies between the project and their central preferences as a reason to start a judicial appeal. The VWE face another inconsistency in relation to the economic viability of the project. In order to reduce the economic viability of the project, the VWE has consistently supported proposals and measures that would increase the costs of the project for Deventer. At the same time the VWE has explicit fears that when it comes to the stage of the implementation of the project, the city of Deventer will choose to abandon expensive alleviating measures (like the buffer-zone) on financial grounds, claiming that there is no money left to pay for these expensive measures<sup>79</sup>. In this way, the relative success of the strategy to increase costs is likely to decrease the changes that the hoped for alleviating measures will actually be materialized.

## 6.2 Legitimacy of the project

The *input legitimacy* of the project is high (level 3), related to the fact that all actors and forms of knowledge have entrance to at least some parts of the arena. The *throughput legitimacy* varies between different periods in the process. In the 2003 period the legitimacy of the process was at very low levels, reflecting procedural mistakes made by Deventer, inadequate use of knowledge in the environmental impact assessment and the feelings by opponents that Deventer had proven to be an untrustworthy partner. In the 2005 period the legitimacy of the process was high, reflecting the more interactive and cooperative structure of the interaction. In the current situation the legitimacy is high for stakeholders that are involved in the process (Lochem, regional water authority). The VWE and individual citizens are not directly involved in drafting new proposals and are waiting for the city of Deventer to present new proposals. In their eyes the legitimacy of the process has currently an

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<sup>79</sup> Reactie bestemmingsplan bedrijventpark A1, VWE, 2005, interview 16-1-2008.

intermediate value<sup>80</sup>. The values of the *outcome legitimacy* can only refer to the proposals that have been made during the process, as no definite decision has been taken yet. Within the Deventer political arena and in the local business community the legitimacy of the proposals has been high during most of the process, although a few small parties have had their objections. For other stakeholders the output legitimacy was at a very low during the 2003 period. In the 2005 period it was clearly at a higher level, but with considerable variations between different stakeholders. Currently, most stakeholders with important competences agree that the project has met their basic prerequisites, but the citizens and the VWE are still pronounced opponents of the plan, even in its current form (which they agree is better than former proposals). This would result in an intermediate value of output legitimacy (2) in the current situation.

### **6.3 Relations between governance and knowledge forms and sustainability and legitimacy of the project**

As we have indicated before (5.1), the basically hierarchical governance arrangements play an important role in setting the dominance of expert/professional and institutional knowledge. In terms of sustainability the effects are mixed. On the one hand the arrangements enable the city of Deventer to develop a project (even against strong local opposition), as long as it is supported in their own political arena and meets all required legal provisions in terms of the related specific knowledge claims. One might argue that such a project will have at least some level of unsustainability on the ecological dimension and only intermediate sustainability on the economic and social dimensions. On the other hand, the legal provisions have played an important role in improving the proposals made in terms of social and ecological sustainability and in improving the comprehensiveness of the process. In other words: without the legal provisions the result could (and probably would) have been much less sustainable. To a certain extent the same mechanism is found in relation to the knowledge forms and the subsequent claims of stakeholders. On the one hand the expert/professional and institutional knowledge forms are dominant, reducing the role and influence of other knowledge forms. However, the regulations also provide the opponents of the project to gain access to the dominant knowledge forms, and (given that they could mobilize their own knowledge claims in these forms) enabled them to counter argument and fight the proposals made by Deventer with substantial success. This has also improved sustainability. In the current configuration of the actors in the action arenas, it is very doubtful whether the claims of the opponents (particularly in other knowledge forms) would have been very influential without the institutional backing of the legal provisions.

The important role of institutional arrangements in creating dominant knowledge forms and influencing the outcome of the process is very well illustrated by the issues concerning air quality. Before the new regulations on PM10 and NO2 came into effect (and were strictly enacted), the air quality issue played a very marginal role in the process. Through the legislation expert/professional and institutional knowledge became dominant in this issue. In fact it can be stated that the issue as such would not have existed without scientific knowledge, as the small particles are not observed by humans. Therefore they are not seen as problematic when only everyday or local knowledge is available. The absence of a 'sense of urgency' on the issue on small particles among local citizens (both in Deventer and in Gorssel) might be explained by this characteristic of the problem. When the regulations came to effect they

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<sup>80</sup> Interviews 16-1-2008.

immediately defined a dominant knowledge form (expert/professional in the form of mathematical models to be used) and institutional criteria to be used in defining the project as 'legally permissible' or 'prohibited'. From this day the process has been stopped in its formal proceedings, although some additional cooperation and bargaining has taken place. A final conclusion in terms of the influence of this arrangement on the sustainability of the project can not be drawn yet. On the one hand it can be claimed that a possible project with non-sustainable ecological consequences has been prevented to materialize through these legal provisions. On the other hand, the provisions have not yet resulted in any substantial changes in the project proposal. Some measures concerning traffic infrastructure are under consideration, but they are aimed at solving air quality problems at specific road sections, not on reducing total emissions from traffic. Additionally, through new developments in estimates of background levels in the Netherlands (the are estimated to be much lower) and through new (lower) emission factors of cars used in the models, the PM10 problem seems to be 'resolved' (at least in the legal sense) for the Deventer case. Once the standards are met, there will be no incentive left to develop measures that will reduce PM emissions further, for on this issue the legal pressure has been the only factor that has made an impact in the process<sup>81</sup>. This will however not mean that the business area A1 will certainly become a reality in the near future. In the current estimates there are still a few problematic situations in terms of NO<sub>2</sub> and the VWE and other opponents are still determined to fight the project with all possible legal means.

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<sup>81</sup> Several interviews with proponents and opponents.