

Public Participation?

The influence of characteristics of projects on the role of stakeholders and design changes

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ONTPOLDEREN

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Public Participation?

The influence of characteristics of projects on the role of stakeholders and design changes

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PREFACE

This report represents the end product of my study Civil Engineering & Management at the University of Twente. This Master thesis project aimed to provide insight in the way stakeholders are influenced by political decisions and how this influenced affected the design of projects. Specifically, projects are analysed that are carried out within the programme 'Room for the River'. This programme formed the transition from a traditional approach for flood prevention to an approach that focuses on increasing the discharge capacity of rivers. Side-effect of this approach is that these measures have a larger impact on spatial planning. The 'Room for the River' programme also points out that locally people face measures that are necessary to protect other areas of the Netherlands. To gain support among stakeholders an important aspect of the 'Room for the River' programme is public participation. For public participation it is essential that stakeholders have the freedom to adapt the design to their interests. This research shows if projects within the 'Room for the River' programme also offer this freedom or that the eventual design of the measures is already largely determined during composition of the programme.

This study could not be carried out without the help of my supervisors: Maarten Krol, Marcela Brugnach and Claus van den Brink. I would like to thank them for the provided feedback and the interesting discussions during the meetings on different topics. Furthermore I would thank them for the time they invested in making this report a piece of work that I fully support. Especially I would thank Claus for the discussions we had during our shared journeys in the train and for showing me the practical side of designing river widening projects during the site visits.

Next to my supervisors I would like to thank ARCADIS for providing me an interesting subject for my MSc-thesis and for giving me the possibility to experience how work is at such a company. In particular I want to thank my colleagues for the nice chats during working time and pleasure I have had in the past few months.

Furthermore I want to thank my friends, both in Enschede and Wijhe, for the relaxing moments in times of stress. I also own gratitude for the great years we have had and I hope we can share many more years. Last, but not least, my special thanks go out to my family and my girlfriend for all the support they showed during the last six years and for helping me whenever necessary. This is somewhat I will always keep in mind.

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SUMMARY

After two flood peaks in 1993 and 1995 the normative discharge of the river Rhine was raised from 15.000 m³/s to 16.000 m³/s to comply with legal safety norms. To deal with this increased discharge the Dutch Government initiated the 'Room for the River'-programme. This programme concentrates on improving river discharge capacity rather than on strengthening dikes. Measures that improve discharge capacity have an impact on spatial planning. These measures along with various preconditions were appointed in a spatial plan composed by the Dutch Government. After formal consultation by stakeholders the final plan (called PKB 'Room for the River') was approved in 2006 and includes 39 projects (Eerste Kamer der Staten-Generaal, 19-12-2006). Since 2006 the programme is implemented and the programme was in its final planning stage when this research started.

An important aspect of the 'Room for the River'-programme is the involvement of stakeholders. This study examines behaviour of stakeholders in 'Room for the River'-projects. The research aims to understand the influence of decisions stated in the PKB on stakeholders. The influence is investigated by analysing stakeholder characteristics and effects on the design. For examination independent and dependent variables are distinguished. Independent variables are set before the process starts, undergo no change throughout the process and some are mentioned in the PKB. The contrasting dependent variables can be adapted during the process. This study focuses on three independent variables mentioned in the PKB and their influences on stakeholders: land use after realisation, the type of measure and the type of initiator. The phase concerned is the SNIP 3 phase, which is preceded by composition of a Preferred Alternative and ends by granting the permits needed for realisation. This research connects decisions made by politicians and the impact these decisions have on a specific phase of the design process. The outcome of this study may be used to take into account the influence of political decisions for process management and stakeholder involvement.

Four projects are selected and thoroughly analysed on their initial situation, stakeholder characteristics and adaptations in the design. Stakeholder characteristics are formed by interests, power and their relations. Similarities between various cases are distinguished to show which factors were not influenced by the distinguished independent variables. Case selection is done in such a way that a broad range of the independent variables is analysed.

Depoldering the Noordwaard was the first case studied, followed by analysis of the construction of a high water channel between Veessen and Wapenveld. The third case is the floodplain excavation project 'Ruimte voor de Lek' near Vianen and Nieuwegein, while excavation of the Huissensche Waarden floodplain forms the last case. In each case a comparison is made between two designs to distinguish changes in the design made in SNIP 3. This is followed by an analysis of stakeholder characteristics. After these individual analyses three bilateral comparisons are made to identify influences of the independent variables. The influence of proposed land use is studied by comparing Noordwaard and Veessen-Wapenveld. The type of measure focuses on differences between inner and outer dike measures, by comparing the Noordwaard and 'Ruimte voor de Lek'-cases. Differences resulting from choosing a public or private initiator are studied with the 'Ruimte voor de Lek' and Huissensche Waarden projects.

First of all this research points out the programmes of Ecological Main Structure and Natura 2000 influenced appointment of land use after realisation, resulting in a focus on nature development. Investigation of initial phases showed early involvement of stakeholders in the preceding phase resulting in more collaboration, provided that stakeholders perceive influence on the design. Similarities in stakeholder characteristics show identical interests of the various governmental parties in all cases, combined with a high power position of these stakeholders. Furthermore some general interests with case-specific application are seen amongst other stakeholders.

Secondly, this research shows that stakeholder characteristics are mainly influenced by the type of measure and the type of initiator. The power and relation characteristics were most affected by independent variables. Differences were noticed between different kinds of public initiators, visible in the way they handle conflict situations. Local governments tend to maintain aspects in the design favouring their interests, while other governments compensated stakeholders that were negatively influenced by changes. Changes in the design resulted from interests that were widely supported amongst stakeholders. This indicates a rather limited influence of power and relations compared to stakeholder interests. By

concluding that independent variables mainly influence power and relations, it is found that the distinguished independent variables had little effect on changes in design.

It can also be concluded that several particular facets can introduce changes in the design. One of these aspects results from the requirements needed for granting the permits for the design, induced by governments. Because the SNIP 3 phase ends by granting the permits, the accompanying design must meet the demands for permits. This explains several changes that were implemented in the design. Other particular parts that induce changes in the design have a contextual character, like the location of the measure. Scale of the changes generally depends on the amount of collaboration between stakeholders in earlier phases. More collaboration in earlier phases result in changes that have a more detailed character, while projects with little collaboration in preceding phases show bigger changes.

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1. INTRODUCTION

1.1. BACKGROUND

Currently the Dutch government is preparing the country for effects of climate change (Rijksoverheid, 2009). The effects of climate change in the Netherlands are most likely intensified precipitation and a higher frequency of high precipitation rates. All this precipitation must be discharged again, which is partly done by surface water. In combination with a higher discharge of melting water in the Rhine catchment area due to global warming it is expected that higher peak discharges will occur more often (Commissie Waterbeheer 21e eeuw, 2000). Because of these higher discharges it is uncertain if the current layout of the rivers satisfies current safety norms.

The current layout of the rivers is largely determined by human interference. For example, building levees and straightening the river reduced natural behaviour of the river and restrained the river to a certain area. This is one of the reasons that subsidence occurs in large areas of the Netherlands, leading to a larger share of the Netherlands located below sea level (Commissie Waterbeheer 21e eeuw, 2000). The result of this is that larger areas can be flooded and inundation heights will be higher, increasing possible damage due to flooding. Furthermore, consequences of flooding have increased because of the improved economic situation in the Netherlands and due to an increase in population (RIVM, 2004). When no intervention would take place to maintain the current safety norms the consequences of flooding would increase more. Awareness of the vulnerable situation of the Netherlands was raised after two flood peaks in 1993 and 1995, which resulted in the evacuation of 250.000 people in 1995 (Room for the River). These peaks made people aware that measures had to be taken to guarantee safety for the people of the Netherlands on the short term.

The flood peaks of 1993 and 1995 caused an increase of the normative discharge of the Rhine River from 15.000 m³/s to 16.000 m³/s (RIZA, 2001). This formed the trigger for the 'Ruimte voor de Rivier' (Room for the River, Rftr) programme. This programme has the objectives to bring the safety level of the river area on the desired standards and to increase spatial quality of the river area.

Safety against flooding is the main objective and must be reached in 2015. Measures focus on increasing discharge capacity rather than strengthening dikes, as traditionally done. Current measures already respond to a possible further increase of normative discharge in the future due to climate change. This is done by requiring conservation of the effectiveness of measures at higher discharges. The total budget for implementation of the programme is € 2.3 billion. In total 39 projects are appointed in a spatial plan, called the PKB (Planologische KernBeslissing, Spatial Planning Key Decision). The PKB indicates which measures have to be taken and is approved by the Dutch government (PKB 4: Vastgesteld Besluit, 2006).

The objective of spatial quality is included in the PKB because the river landscape forms an important part of the Dutch landscape. To reach this objective spatial plans are made for each of the Rhine branches. In 2004 a policy was introduced that made local governments responsible for spatial planning (Rijksoverheid, 2011). This policy also intended to improve spatial quality. For the river area this focused on enhancing spatial diversity between river branches, maintaining and enhancing the open landscape with characteristic waterfronts, conserving and developing values in the landscape and encouraging possibilities for boating in main channels (PKB 4: Vastgesteld Besluit, 2006).

Figure 1 gives an overview of the PKB procedure for Rftr and how this procedure is intertwined with the EIA-procedure (Environmental Impact Assessment) for this programme. The consultations mentioned are formal consultations that are obligatory by law.

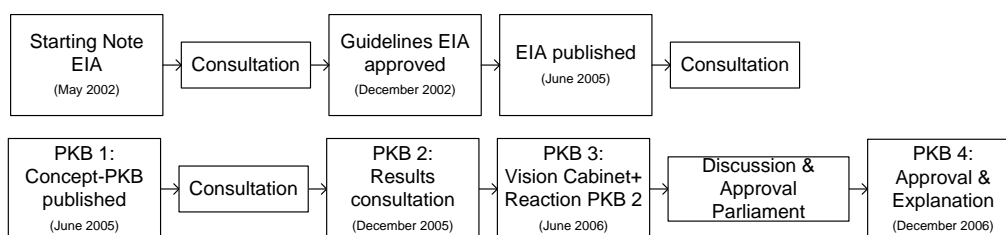


Figure 1: Overview PKB procedure & link with EIA-procedure

The PKB mentions strategic choices which are made during the design-making process. One of those choices is that measures must account for the long term. Expectations are that the normative discharge might increase to 18.000 m³/s, while the sea level can rise with 60 cm, both due to climate change. For the Lek the long term has no consequences because no extra measures can be carried out on the long term. The current discharge distribution will be maintained up to a discharge of 16.000 m³/s, above this level the Waal and IJssel must deal with additional discharge. On the long term retention areas must be developed. Furthermore RftR aims to prevent that more measures need to be taken in the same area. RftR also provides opportunities. Current values in the river area must be maintained, while chances are present to combine the safety objective with development of nature and recreation, extraction of natural resources and chances for urban development (PKB 4: Vastgesteld Besluit, 2006). In the PKB reservations are made for measures necessary for the long term objective of 18.000 m³/s. These measures must be finished between 2050 and 2100. In combination with cooperation with other countries in the catchment area this will make sure the Netherlands will maintain its safety level (Deltacommissie 2008).

The objectives of RftR will be reached with 9 different types of measures, in which a distinction can be made between measures located in inner and outer dike areas. Measures located between the current dikes are floodplain excavation, lowering groynes, removal of obstacles, water storage on lakes and deepening the summer bed. Inner diked measures are inland relocation of the dike, depoldering and creation of a high water channel. The last option is to strengthen the dikes, but this is only done in areas where creating more room is too expensive or inadequate (PDR, n.d.).

The second objective of the RftR-programme is to improve spatial quality of the river area. This must result in a strengthening of the economic, ecologic and spatial value of this area. Conservation and development of protected nature values gets special attention. By improving spatial quality the area must become more attractive and liveable. For the river area this is done by enhancing spatial diversity, the open character of the area with characteristic waterfronts and use of commercial and recreational shipping. Furthermore it is stated that current spatial, ecological, geological and cultural values must be conserved and developed (PKB 4: Vastgesteld Besluit, 2006).

The last progress report shows that at the beginning of 2011 most projects of the PKB were nearing the end of the planning study or were already in the realisation phase. These projects were carried out according the SNIP-procedure (Appendix A). For 23 projects the SNIP 3 decision had to be taken, a decision that marks the end of the planning study. For 11 other projects this decision has already been taken and these projects are now in the realisation phase. Currently one project has been finished, while 5 projects are not carried out anymore (or the intention exists) for various reasons. For one project the alternative study is still carried out. The progress report also points out that four measures will be realised after 2015, but that the safety objective still can be realised in 2015 (Voortgangsrapportage 17, 2011).

All the measures of RftR have a large impact on the direct environment. To ensure involvement of stakeholders in the design process consultation is included in the Law on Spatial Planning. Furthermore it is stated that modern spatial planning often is organised as an interactive decision making process involving all stakeholders concerned (Bulens & Ligtenberg, 2006). Stakeholders involved in the design process are nowadays seen as an addition to the process and have an important part in successful realisation of measures (de Graaf, 2005). Because the eventual design is a result of an interactive process between stakeholders and the influence of stakeholders on the design it is important that the base of the interactive process is equal for all stakeholders. In this way the design will represent the outcome of the process between stakeholders best.

1.2. PROBLEM DEFINITION

Characteristic of RftR is that it claims to pay much attention to cooperation with local governments and residents (Programmadirectie Ruimte voor de Rivier, 2009). This shows that for implementation of measures interests of stakeholders are also taken into account, leading to an interactive process. In the end, such a process will result in a richer policy proposal that can be implemented more efficiently and thus raises democratic legitimacy of decisions (Edelenbos & Klijn, 2005). According to Evers (2011) the framework of an interactive process is best determined via a top-down approach. If this is not done this might lead to a more uncertain or directionless process, which undermines the progress of the project (Evers, 2011). Edelenbos & Klijn (2005) state the outcome of an interactive process is good when

stakeholders are satisfied and an enrichment of ideas has taken place. In the RftR-programme the outcome of the interactive process is represented in the eventual design of the measure.

The outcome of the process is largely determined by contextual factors and characteristics of stakeholders (Evers, 2011). Evers (2011) indicates three layers of contexts that influence interaction between stakeholders. The first layer is the broad context layer, which consists of contexts considering the problem, politics, economics, culture and technology. The second layer is called the structural context and exists of governance issues like strategies, ambitions and responsibilities. The last layer is the layer most closely related to the interaction process and deals with decisions made earlier in the process and specific conditions of the process. The influence of contextual factors can be different for each stakeholder. Distinguished characteristics of the stakeholders are interests, power and relations (de Bruijn & ten Heuvelhof, 2007). The initial phase of the project largely sets the context of the project (Evers, 2011). Characteristics of stakeholders are more static than contextual factors.

During development of the PKB choices were made, which can be seen as setting preconditions for the measures. Examples of these choices are the location of the measure, the budget, the type of measure and the desired land use after realisation. The PKB was compiled after negotiation between governments, provinces and umbrella organisations of water boards and municipalities. Societal organisations were included via representatives in regional advisory boards. Residents were only consulted via the formal participation opportunities (Meijerink, 2004). Within the PKB decisions were made where and which measures must be carried out. Furthermore the water level drop is determined, as well as the land use after implementation of the measure. After the PKB the Programme Directorate Room for the River (PDR, part of Rijkswaterstaat) appointed initiators of the projects.

The outcome of the interactive process is determined by characteristics of stakeholders and the context. The desired design can be seen as the outcome of the interactive process and thus it is influenced by the context and the characteristics of stakeholders. These factors often intertwine, so it is not clear how each of these factors on itself determines the eventual design.

1.3. OBJECTIVE

The objective of this research is to gain insight in how characteristics of actively involved stakeholders in the design process of river widening projects are influenced by choices made in the PKB 'Room for the River' and what the effects are on the SNIP 3 Design. This is done by analysing stakeholder characteristics and comparing Room for the River-projects on specific independent variables and by investigating what induces changes in the design in the SNIP 3 phase.

Stakeholders actively involved in the process are stakeholders that are seated in the Stuurgroep (Steering Group, SG) or klankbordgroep (Sounding Board Group, kbg) or otherwise involved by the initiator of the process. The SG normally consists of representatives of governments and is often in charge of the project. The SG includes the chairman of the kbg to communicate demands of the kbg to the SG. In the kbg representatives of other stakeholders are seated. The river widening projects are part of the RftR-programme. In this study four projects are analysed, mentioned in section 1.4. The distinguished characteristics of stakeholders are (de Bruijn & ten Heuvelhof, 2007):

- Interests;
- Power;
- Relations.

The outcome of the process is determined by characteristics of stakeholders, the context and the process (Evers, 2011). Because of this, affecting characteristics of stakeholders can have large impacts on the final design.

Next to policy choices, project-specific choices are also made in the PKB. The project-specific choices consider land use after realisation, the type of measure, the location of the measure and the hydraulic objective. Furthermore the type of initiator is also appointed before the start of the process. These choices are stated in the PKB and considered as independent variables because they are set before the process starts and undergo no change throughout the process. Because these variables are stated in the PKB they are approved by governmental institutions. The independent variables distinguished in this study are the proposed land use after realisation, the type of measure and the type of initiator.

The variables for land use are nature, agriculture, housing and recreation. These last two occur only in combination with nature. There are nine different types of measures included in the RftR-programme. These measures are already mentioned in paragraph 1.1. The character of the initiator is restricted to two options, a public and a private initiator. How the several independent variables are compared is shown in paragraph 1.4. During composition of the PKB the public was only consulted via formal participation opportunities and was hardly involved in the decision making process (Meijerink, 2004). This shows that the independent variables were mostly influenced by the public and appointed by governments.

The objective shows that the time-frame of the study is the SNIP 3 phase of the project. SNIP is a procedure of Rijkswaterstaat that defines several phases of the project. The SNIP 3 phase is preceded by composition of a Preferred Alternative in SNIP 2a and ended by granting of permits for realisation after formal approval by the State Secretary. This formal approval is accompanied by formal documents. Only after approval of the State Secretary it is possible to continue the process. Specification in SNIP 3 results in a design that forms the end of the planning study phase and the beginning of the realisation part. More background information on the SNIP procedure and its link with the EIA-procedure is given in Appendix A. In this phase adaptations in the design are bounded by rules considering permits and subsidies that are granted based on the planning study (Evers, 2011). Furthermore the SNIP 3 phase forms the end-product of the planning study and thus the starting point of the realisation phase, giving a good indication of the design that will be carried out.

With this research more knowledge is gained about how characteristics of active stakeholders are affected by choices made during composition of the PKB and how this is translated in the SNIP 3 Design. Because stakeholder characteristics have much influence on the outcome of the process (Evers, 2011), this study also provides insight in how much influence independent variables have on the eventual result of the project.

The objective of this study will be achieved with the following research question:

How do independent variables influence characteristics of active stakeholders and what are the consequences for the SNIP 3 Design of river widening projects?

In this research is chosen to distinguish three independent variables which will be analysed. The considered independent variables are:

- 1) Land use after realisation;
- 2) Type of measure;
- 3) Type of initiator.

The foregoing research question will be answered with the help of four sub questions.

1. What is the initial situation of the analysed river widening projects of the SNIP 3 phase?
2. Which similarities in stakeholder characteristics can be distinguished in the SNIP 3 phase?
3. How are stakeholder characteristics in the SNIP 3 phase influenced by independent variables?
4. Which adaptations are made in the design during the SNIP 3 phase and which stakeholders benefit from these adaptations?

1.4. METHODOLOGY

To answer the research question several RftR-projects are analysed. These projects are a depoldering project, construction of a high-water channel and two floodplain excavations. For these kind of measures is chosen because they form the largest spatial challenge, resulting in the involvement of many stakeholders. The depoldering and high-water channel measures can be seen as an extreme form of dike relocation. These kind of measures are likely to be taken to ensure safety of the river region on the long term (Ruimte voor de Rivier, 2006).

The projects that will be analysed in this study are:

1. Noordwaard (depoldering);
2. Veessen-Wapenveld (high-water channel);
3. Ruimte voor de Lek (floodplain excavation);
4. Huissensche Waarden (floodplain excavation).

The cases are selected in such a way that a broad range of the distinguished independent variables are analysed. Figure 2 gives an overview for the locations of all RftR projects. In this Figure the green dots

locate the projects investigated in this study. The numbers in the Figure correspond with the projects that are mentioned above. These projects are chosen because the planning study phase is (almost) ended for these projects. The red dots in Figure 2 are the locations of other RftR-projects.



Figure 2: Overview RftR projects

All these projects are analysed identically. The analysis is carried out according several steps, presented in Figure 3. Steps 1 to 6 are carried out for all cases separately. Steps 7 and 8 combine the results to draw a conclusion in the end.

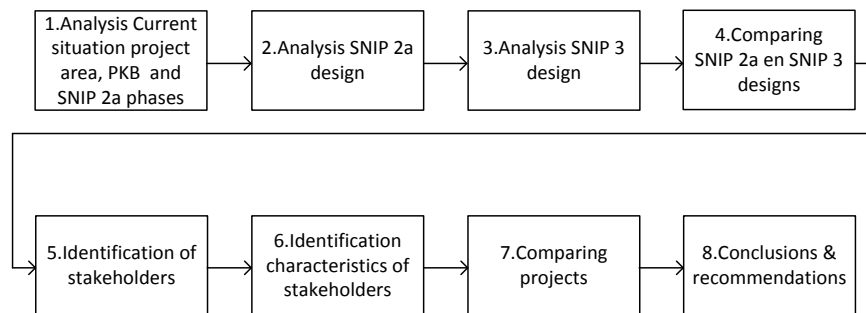


Figure 3: Framework analysis RftR projects

Initial Situation

Firstly a description of the project area of the specific project is made by looking at five subjects: (1) agriculture, (2) nature, (3) landscape, (4) living and (5) recreation. These subjects are chosen because they characterise the proposed land use after realisation in the PKB. The PKB and SNIP 2a phases are analysed because they can have a large impact on the SNIP 3 phase and to investigate the initial situation of the projects. For description of the current situation and of the SNIP 2a phase public documents like the EIA and the formal documents accompanying the SNIP-decisions are used. The PKB phase is described with consultation in PKB 2 as main input. In the PKB 2 reactions on the Design PKB (PKB 1) are included, as well as some reports of discussion between governmental parties.

Description and comparing designs

After analysing the current situation the SNIP 2a design will be described. In this way the starting situation of the SNIP 3 phase becomes clear. Description of the SNIP 2a Design is followed by the SNIP 3 design. This design marks the end of the SNIP 3 phase and thus of the planning study. After these descriptions, the designs are compared with each other. By doing this, adaptations made during the SNIP 3 phase become clear. This also gives information on the interactive process, because designs are the outcomes of the interactive process up to that phase. During the PKB some broad designs were made in order to investigate hydraulic efficiency, but many adaptations were still possible. Therefore these designs were not formally approved.

Stakeholder characteristics

After comparing the designs it is time to take a more in depth look in the SNIP 3 process. Prerequisite for this is that the active stakeholders in the process must be identified. This is done by investigating the composition of the SG and kbg of the specific project. The stakeholders can be grouped according their core activities. By grouping stakeholders the overview of the analysis is maintained. When stakeholders are identified the characteristics of the groups can be analysed. The characteristics of stakeholders are determined by interests, power position and relations (de Bruijn & ten Heuvelhof, 2007).

The first characteristic of stakeholders is its interests. To identify interests of stakeholders reports of informal sessions are used. Within the SNIP 3 phase no formal consultation takes place. Furthermore a distinction is made in the priority for seeing the interest of stakeholders granted. By analysing interests it becomes clear what the stakeholder wants to achieve with its active participation. The analysed interests are the interests in the SNIP 3 phase. This means that some interests are already granted or rejected. However, some granted interests need to be protected in order to see them back in the final design.

The second characteristic is the power of stakeholders, divided into authority, financial means, land tenure and specific knowledge (de Kort, 2009). Authority is only possessed by public parties and has three levels: national, regional and local (de Kort, 2009). Authority is determined by the level of governance of the stakeholder. Authority identifies if a stakeholder is appointed by law to carry out decisions. It must also be taken into account that public parties included in the project have to consult plans to the body they represent, which can influence the behaviour of the representative (Evers, 2011).

The second power mean is formed by financial means, which are needed for realisation of the project. By contacting project bureaus information is gathered on this subject. To guarantee confidentiality a ranking is presented instead of numbers. PDR has budgets reserved for the projects, so it is expected that in cases with public initiators they will form the largest contributor to implementation of the measure.

Land tenure, is also gathered by contacting project bureaus. In this subject the location of the land is of big importance. To keep things clear land tenure is also divided according the stakeholder groups. Important in this aspect is that the date is taken into account. It is likely that the State will already start buying land during the planning phase, which could result in a disproportionately large share of land owned by the State.

The last power mean is specific knowledge. This specific knowledge can be used as input during the design process. A stakeholder has most knowledge on its main activities and therefore a close relation exists between main activities and specific knowledge. When a stakeholder possesses knowledge of a subject that plays a big role in the project it can provide insights that contribute to the process. The most important power means are finances and land tenure because these are not equally distributed among stakeholders and will result in negotiation and bargaining (de Kort, 2009).

The third characteristic is the relation a stakeholder maintains with other stakeholders. The relation among stakeholders is analysed with a network diagram. By using this, insight is gained in the interdependence of stakeholders and how their positions in the network affect their possibilities, limitations and behaviour in the process (Rowley, 1997). A network diagram identifies cooperation and conflict that occurred during the process. Furthermore it can be used to show where potential conflicts are located by giving an indication of opposite interests. A network diagram indicates which alliances are made during the process as well as where compromises are made. From the informal reports also used to distinguish interests of stakeholders and regional media it becomes clear if stakeholders collaborate or conflict. If opposite interests exists, this is translated in two ways in reports of meetings. Some groups will seek to compromise, while another group aims for conflict. Conflict is visible when a state of opposition between individuals or groups about values, interests of resources shows up (Winnubst, 2011).

The design process is characterised as an interactive process. The interaction between stakeholders is characterised with the use of the ladder of interaction (Pröpper & Steenbeek, 1998). The several roles of this ladder are presented in Table 1, where the most interactive style is placed on top. It also shows the degree of influence that stakeholders can get; moving up the ladder, the degree of influence increases, and moving down, it decreases. The rows above the thick line indicate interactive roles, while the last three roles are non-interactive.

Table 1: Participation ladder (Pröpper & Steenbeek, 1998)

Role participant	Description style
Initiator	Planning team provides resources to other stakeholders
Partner	Planning team works together with other stakeholders
Joint Decision Maker	Planning team gives some authority to others for decision making
Advisor	Planning team requests advice from participants on open-ended questions
Consulter	Planning team consults other stakeholders about pre-determined issues
Target Group	Planning team only informs other stakeholders about her policy
No role	Planning team does not inform other stakeholders about her policy.

After analysis of the characteristics of stakeholders a Power-Interest Diagram (PID), based on the SNIP 3 phase, is made. This tool is used to draw conclusions, after combining it with results from the relation characteristic. In a PID the power and interests positions of all stakeholders are plotted against each other. The PID distinguishes four types of stakeholders according their position in the diagram. The first type of stakeholder is formed by the so-called players in the process, a group had with high power and interest. Context setters have much power but little interests, while subjects have much interest but little power. The group that is called the crowd has low power and interest (Bryson, 2004). PIDs are applicable to help determine which players' interests and power must be taken into account to address the problem or issue at hand. They also highlight coalitions to be encouraged or discouraged, what behaviour should be fostered and whose 'buy-in' should be sought or who should be 'co-opted'. A PID also provides information which opponent must be persuaded to change its view in order to increase the chance on a desired outcome of the process or to help advance the interests of the relatively powerless (Bryson, 2004). Bryson (2004) makes the statements above from the point of view of a project manager.

Independent variables

With the foregoing a systematic analysis is made for all projects. However, in order to answer the main question it is essential that cases are compared with each other. The main point of interest of this comparison is to investigate the influence of independent variables. The independent variables that are analysed in this research are the type of measure, the proposed land use according to the PKB and the initiator of the planning study. In Table 2 the choices made for the specific projects are presented.

Depoldering and high water channels are considered as special cases of dike relocations and thus take place in the inner dike area. In the PKB 4 document the government decided on the proposed land use after realisation for all measures, given in column 3. The last column shows the initiator of the planning study phase. It is clear that the Huissensche Waarden is the only project with a private initiator.

Table 2: Chosen options independent variables

Project	Measure	Proposed land use PKB(*)	Initiator
Noordwaard	Depoldering	Agriculture & Nature	Rijkswaterstaat
Veessen-Wapenveld	High-water channel	Agriculture	Province
Ruimte voor de Lek	Floodplain excavation	Nature & Recreation	Province
Huissensche Waarden	Floodplain excavation	Nature	Private

* (PKB 4: Vastgesteld Besluit, 2006).

In order to answer the main question and subquestion 4 the projects are compared with each other. The first comparison is the depoldering of the Noordwaard and the high-water channel (hwc) between Veessen and Wapenveld. This comparison is used to analyse the effect of the designated land use. The depoldering project has a desired land use after realisation of agriculture combined with nature, while for the high-water channel only agriculture is planned in the channel area. Even though both projects cover different measures, these measures are comparable. Both measures are located in currently protected lands and have a large impact on the direct environment of the project area. Furthermore the projects are initiated by a public party.

The second comparison analyses the influence of the type of measure by comparing the Noordwaard and 'Ruimte voor de Lek' projects. In this way the differences between a measure in the inner and outer dike area become clear. In both projects nature is planned alongside with another type of land use. Furthermore public parties are the initiators of these projects.

The last comparison is made between the 'Ruimte voor de Lek' and Huissensche Waarden projects. The Huissensche Waarden project is the only project within the RftR-programme with a private initiator and thus this comparison will investigate the influence of the type of initiator. Both projects consider a floodplain excavation and have the purpose to realise nature after realisation, whether or not in combination with another land use. Both project areas are located in urbanised areas.

1.5. OUTLINE REPORT

In the second chapter the different case studies are presented. In this chapter the description of the project area and the current situation is given. This is followed by the description of the SNIP 2a and SNIP 3 Designs and the corresponding comparison. In Chapter 2 also the different stakeholders are identified, along with their interests. This is followed by a conclusion that focuses on independent variables and contextual factors of the particular case. Chapter 3 shows the three comparisons that will point out the differences in stakeholder characteristics. In this chapter the link with changes in the design is made and what has caused these changes. For this, three different factors are distinguished: independent variable, stakeholder characteristics and contextual factors. With these investigations a discussion on the results is presented in Chapter 4, followed by the conclusions and recommendations in Chapter 5.

2. PROJECT ANALYSIS

In this Chapter several projects for Room for the River are analysed on their characteristics and their changes in design throughout the process. With this, a comparison between projects can be made later on in the study.

2.1. NOORDWAARD

The first analysed project is the depoldering of the Noordwaard. The Noordwaard is situated in the province of Noord-Brabant and consists of several polders. The Nieuwe Merwede forms the boundary to the north and west, to the south the project area is bounded by the Biesbosch National Park wetland. The eastern boundary is formed by the Steurgat waterway. Within the Noordwaard an area is transformed from agricultural land into nature (the Nature Development Area, NDA) as part of a governmental nature development plan. Currently the Noordwaard dike-ring (dashed line and boundaries Figure 4) has a safety standard of 1/2.000 against flooding, the areas outside the dike-ring is protected by a summer dike. The depoldering is assigned as a leading project within RfR due to its location in the Waal Delta, its effect on the water level and to maintain support. An overview of the project area is shown in Figure 4.

The objective of depoldering of Noordwaard is to decrease the water level at the city of Gorinchem, which is located about 8 km upstream, with 30 cm (at river kilometre 955) provided that the water level in the Amer River does not rise. The PKB states that the possibility must be created for residents of the area to remain in the Noordwaard. Furthermore the area must provide new foraging area for waterfowl to compensate loss due to realising the project, thus net change is 0 ha (PKB 4, Nota van Toelichting, 2007).



Figure 4: Overview project area Noordwaard (edited from Google Earth)

2.1.1. Description Initial Situation

Agriculture

At this moment Noordwaard agriculture is mainly an agricultural area. About 80% of the land, divided over 26 farms, is used for agricultural purposes. Agriculture is mostly executed as arable farming, but also dairy farms, a horse farm and some mixtures of dairy and arable farms are located in the area. Most arable farms grow crops like potatoes, beets and grain but also vegetables and grass seed is grown. The soil of the Noordwaard is very suitable for agriculture. Dairy farms use relatively much land (Toelichting RIP Ontpoldering Noordwaard, 2010). Agriculture results in an open landscape of the Noordwaard, especially in the northeast, which is also seen in Figure 4.

Nature

South of Noordwaard the Biesbosch wetland is located, an area consisting of willow woods with wide creeks. The area outside the dike-ring is a Natura 2000 area, a nature area protected by European Law. The Biesbosch has a specific environment due to the interaction of tidal and river dynamics. The Natura 2000 area and creeks are part of the EMS (Ecological Main Structure, Ecologische Hoofdstructuur), a governmental nature development programme (Provincie Noord-Brabant, 2011). Some former polders of the Noordwaard have been redeveloped in nature in the last years. The NDA was completed in 2008 as part of a nature development programme, while two other redevelopment projects were realised in 1996 (MER planstudie Ontpoldering Noordwaard, 2010).

Landscape

The Noordwaard is bounded by nature, in the south by the Biesbosch NP and in the west by the NDA. Polders are bordered by tall willows next to (former) creeks and by dikes. Former creeks are visible due to the presence of small dikes and height differences. The fields are also used as resting and foraging area for birds, which require an open landscape. Noordwaard can be characterised as an open landscape in the north-east that gradually changes to a more small-scale landscape in the south west. This is mostly due to the presence of small woodlands (Toelichting RIP Ontpoldering Noordwaard, 2010).

Living

Within the Noordwaard two hamlets are located, Kievitswaard in the north and Steenenmuur in the southeast. Near Werkendam there is a residential area near Fort Steurgat, while also in the fort apartments are built. In total there about 75 households are affected by the depoldering. These households are mostly situated in the northern and south-eastern part of the Noordwaard. In the residential area Steurgat a small business area is located, mostly used for water-related companies as wharfs. People can enter the Noordwaard via roads at the two locks and a small ferry connects the Noordwaard with Dordrecht. This results in much commuter traffic over the road from the ferry towards Werkendam. (MER planstudie Ontpoldering Noordwaard, 2010).

Recreation

Currently about 50.000 visitors a year visit the Noordwaard for recreation. Near Spieringsluis some recreational facilities can be found, including a museum about the Biesbosch. The museum had about 37.500 visitors in 2010, having a large share in the amount of visitors. It is expected to grow to 50.000 visitors after depoldering (Biesboschmuseum, 2011). In Werkendam a marina is located, and several cycling and walking paths are planned, mostly in the west. Visitors are mostly interested in nature of the area, but also water recreation is popular. Up to 2007 the Biesbosch had a standstill principle which prohibited the construction and expansion of marinas in the area, but nowadays plans exist for improving recreation in the Biesbosch area (BN De Stem, 2007).

PKB

The depoldering project was appointed as leading project in RftR during composition of the PKB. This means the project will start before approval of the PKB by the government. The status of leading project is appointed for several reasons. Firstly this status gives clarity for all involved stakeholders. Furthermore the status is given to maintain the accrued support and is inevitable on the long term (Stuurgroepen Boven- en Benedenrivieren, 2005). The status of leading project is supported by all stakeholders (Inspraakpunt V & W, 2005).

Consultation of PKB 1 resulted in 50 reactions, mostly doubting assumptions for normative discharge. Other discussions deal with loss of agriculture, spatial quality, cultural heritage, compensation and demand further investigation of alternatives (PKB deel 2; inspraak en adviezen, 2005). An alternative was proposed by a Platform which exists of several farmers and residents that oppose depoldering. Their alternative focused on measures in outer dike areas. The Platform doubts assumptions of RWS and thinks better solutions are possible. Furthermore they question if the main objective of the project is safety and not nature development. For the NDP arrangements were made that relocated farmers could stay in Noordwaard, but with this project they are forced to move again (Pleijte, During, Gerritsen, & Stuyt, 2005). The alternative of the Platform was evaluated by the government, stating the alternative was only sufficient for the short term and contrary to nature conservation legislation.

Next to the Platform farmers also oppose the plans. Residents in areas that will not face permanent inundation mostly demand clarity for the future. Recreation organisations see opportunities to increase local recreation, while nature organisations see opportunities for nature development.

The inundation frequency of the polders can range from 1/100 to 1/1000 years, depending on the spatial layout of the specific polder. The measure shows opportunities for nature and recreation and will provide foraging area for waterfowl. It is stated that that residents can continue to live in the Noordwaard (PKB 4, Nota van Toelichting, 2007).

In 2005 an administrative agreement was made with Rijkswaterstaat as initiator of the project. This was followed by a Scheme of Approach which was finished in the second half of 2006.

SNIP 2a

After approval of the Scheme of Approach three alternatives were introduced. The alternatives focus on agriculture, nature & cultural heritage and recreation & maximum water drop. These alternatives were used as input for the Design Vision, which was created by interaction between stakeholder groups (Ontwerpvisie ontpoldering Noordwaard, 2007).

In May 2007 the Design Vision was completed. This vision can be characterised as a mixture between agricultural and natural alternatives. The design was consulted and most discussions considered the recreation area near Werkendam. Mainly farmers want to have larger polders, because these have a more efficient agricultural layout, but other stakeholders desire smaller polders. Compensation fees and inundation frequencies are also subject to discussion (Gemeente Werkendam, 2007).

Results of consultation are that the amount of accommodations in the recreation area is lowered and farmers have the opportunity to create small accommodations on their land. Furthermore there are more locations for new houses designated. Inundation frequencies and accompanying dike heights are determined for each polder. Other changes are maintenance of a tour around Noordwaard and an increase of tidal influence in the nature area (Ontwerpvisie ontpoldering Noordwaard, 2007).

After consultation and processing changes the Design Vision was submitted as SNIP 2a Design, which was approved in May 2007.

2.1.2. Comparison SNIP 2a & SNIP 3 Designs

During the SNIP 3 phase several developments were seen. Investigation pointed out that the dike along Steurgat did not comply with standards and has to be improved. This dike section was by mistake not taken into account during approval of the PKB (Voortgangsrapportage 12, 2008).

Description SNIP 2a design

The SNIP 2a design is presented in Figure 5. This Figure shows several types of polders. Polders outside the flow-through area focus on living and agriculture and have flooding frequencies of 1/100 or 1/1000 years. These high-diked polders have the most inhabitants and edges of these polders are pointed out as possible locations for new houses.

The north-eastern part of the flow-through area becomes intertidal area, which will flood daily and where nature will develop. Maintenance of this area will guarantee openness to reach the hydraulic objective. Small streams are connected with the inlets, while the most western inlet connects the intertidal area with the river. Within this area some room is reserved for dwelling mounds and for a recreation area near Werkendam with a marina and accommodations. The eastern part of the flow-through area is designated as wet grasslands where agriculture is combined with nature. The lower areas in these polders are permanent wet for water birds. Livestock and birds are used for maintenance of vegetation. The last parts of the flow-through area are dry grasslands. The land in these polders will be used for cattle and grasslands are drained for profitable use. The polders of the flow-through area are bounded by small dikes.

The polders are separated by creeks which are exactly excavated according the 1905-profile. Some creeks will be used for recreation. Along the creeks nature is planned in such a way that it does not have a negative impact on the flow. A route is created which can be used to make a tour around the Noordwaard and for evacuation. The transformer house remains protected. The Fort will be protected with a gently sloping dike next to the fort. The business area is protected by a dike located next to the companies.

In the Hilpolders some changes are present. Near the current recreational facilities at Spieringsluis some recreational development is planned, focused on experiencing nature. For the expected increase in visitors a new parking lot is constructed. The Museum will be located on an island. The area south of Spieringsluis will be turned into intertidal area with forest and will be connected with the Nieuwe Merwede. Some areas in the Hilpolders will be used as dry low-diked polders with possibilities for cattle.



Figure 5: SNIP 2a Design depoldering Noordwaard

Description SNIP 3 Design

The SNIP 3 Design is shown in Figure 6. Also here different types of polders are distinguished. In the northwest and southeast of Noordwaard high-diked polders are located. These polders are used for living and agriculture. The planned new houses are located at the edge of the polder. The polder near the new recreation area is separated from the channel by trees. The polders are designed for efficient agriculture.

The northeast of the flow-through area will become intertidal area. Small channels are created to encourage tidal influence and the western inlet is connected with the river. The intertidal polders are bounded by low dikes. In this area some dwelling mounds are planned on which new houses are built. In the eastern part of the flow-through area polders will be turned into wet grasslands. Some grasslands are crossed by channels, while low-lying areas are permanently wet. These polders are used for nature development and cattle. During high water cattle can flee to special refuge areas. The wet grasslands are also accessible for agricultural traffic. The other polder type of in the flow-through area is dry grassland. These polders are mainly used by cattle and are well drained. In these polders ditches are seen that connect with a naturally looking channel. Within these polders existing houses will be located on dwelling mounds, which are also used as refuge for cattle. The transformer house in the polders is protected by a dike. Within the polders roads are created for agricultural traffic.

The polders are separated by creeks that are excavated to return the spatial layout from before impoldering. On the banks of the creeks nature is planted in a way it has no negative effect on the flow. Current vegetation with a negative impact on the flow will be removed. Vegetation along the creeks will be trees and reeds. The creeks that pass residential areas have narrow entrances. The Fort will be protected by a gently sloped dike located next to the fort. In front of this dike a willow field is created. This dike is connected with the primary dike so that the business area has no dike next to its parcel.

In the Hilpolders intertidal areas are created where nature will be developed. Some areas face no change and are used as grassland for cattle. Near Spieringsluis and the Museum parking lots will be made to cope with increased recreation, while at Spieringsluis the marina will also be slightly expanded.



Figure 6: SNIP 3 Design Noordwaard

Comparison

To investigate the outcome of the design process in SNIP 3 a comparison is made between the SNIP 2a and SNIP 3 designs. A difference considers the dike around Fort Steurgat. In SNIP 3 this dike is not located directly next to the business area but follows the contours of the Fort more. Between the dike and business area nature is created. The dike is lowered due to inclusion of a willow field in front of the dike.

In the flow-through area some more differences can be seen. The channel between Fort Steurgat and the recreation area of Werkendam is excavated wider in the SNIP 3 design. Furthermore the dike surrounding the transformer house is adapted. In SNIP 3 this dike is more represented as a natural rise in the landscape due to a gentle outer slope. In the wet grassland polders more channels with a natural layout are visible. The water level in the dry grasslands is lowered so agriculture is more beneficial. During this phase iteration was seen between the amount of nature and hydraulic effect. This resulted in removal of nature and development of new nature in other areas that less influence hydraulic effectiveness.

In the SNIP 3 phase more clarity about housing was reached. Some residents moved voluntarily and their houses were removed, while others remained in the area and new houses are planned. To decrease nuisance due to recreation the entrance of the channels near residential area is made narrower. Furthermore some trees are planted between a house and the planned recreational area of Werkendam.

2.1.3. Characteristics stakeholders

Stakeholders are grouped in a SG (Stuurgroep, Steering Group) and a kbg (Klankbordgroep, Sounding Board Group) and can be grouped. First group is the supervising governments, consisting of Rijkswaterstaat South-Holland, water board Rivierenland, the ministry of Agriculture, Nature and Food Quality (ANF) and PDR. The second group is formed by the Province of Noord-Brabant and the municipality of Werkendam. These governmental groups form the SG (Toelichting RIP Ontpoldering Noordwaard, 2010). Other stakeholders are seated in the kbg and are nature organisations, recreation organisations, public companies, farmers, residents and an association for inland shipping (Ontpoldering Noordwaard; startnotitie MER, 2006). The involved public companies are a drinking water and an electricity company. Farmers living in the area are allocated in the residents group.

Interests

Several interests of stakeholders are translated into the SNIP 3 design. More background on the interests and an overview is given in Appendix B.1.

The supervising governments include the initiator of the process and their interest was that the project fits the stated boundaries, like the hydraulic objective and costs. The hydraulic objective is reached by creating a flow-through area with four inlets near Werkendam and two outlets in the southwest.

Management of vegetation is important for maintaining the hydraulic effectiveness. Nature that negatively influences the flow is replaced. Dike improvement along Steurgat is also carried out to meet the safety level, just like the dike around the fort. Next to the hydraulic objective the project must also comply with rules due to nature conservation.

Executive governments have two interests. Compensation of nature is seen in several places, mostly located on the edge of the flow-through area. The demand for recreational facilities is included by an area near Werkendam reserved for intensive recreation development and at Spieringsluis facilities that focus on extensive recreation. For farmers the possibility is given to develop small recreation facilities.

Nature organisations favoured the division of Noordwaard in several smaller polders to encourage the natural layout of the Biesbosch. The polders in the flow-through area show a layout favoured by this group, especially the intertidal areas. Extensive recreation and new houses are located at places where it has no significant effect on natural values.

Residents of Noordwaard are concentrated in two hamlets. These areas inundate once in 1000 years. The residential polders are designed for agricultural purposes, partly to preserve the open character of the landscape. Several dwelling mounds will be constructed to allow people to remain living in Noordwaard. To prevent nuisance due to recreation, recreational facilities are located away from residential areas and creeks to these areas have a narrow entrance. Paths for extensive recreation are located away from residential areas to due privacy reasons. Near houses small piers are planned in the creeks. The road from Werkendam to the ferry shows a separate cycling path for a safe traffic situation. Another demand of residents considers compensation, which cannot be translated in the design.

The second group of residents lives in the residential area of Werkendam. Their area remains its current safety level, but for this a dike must be constructed along the fort. The design shows that in front of this dike a willow field is created to make the dike as low as possible. For safety reasons the dike along Steurgat will be improved with coupures and a retaining wall. The shape of the dike is similar to the fort.

Farmers demanded larger polders to remain agriculture. The high-diked polders are designed in such a way efficient agriculture is possible. In the flow-through area some polders combine the demand for nature and agriculture by agricultural nature management. The demand of this group to develop recreational side activities is allowed, but not noticeable in the design. Another aspect that is not visible in the design is their demand for a compensation agreement.

Influence of recreation organisations in the design is limited to the increase of recreational facilities. At Spieringsluis extensive recreation will be developed along with some facilities like a parking lot. Through the whole Noordwaard some hiking and cycling paths are planned. Near Werkendam the opportunity is created for developing intensive recreation. This development has to be carried out by a private party. The creeks near residential areas are not accessible due to nuisance of visitors. The Biesbosch Museum will be expanded to cope with increased recreation.

The inland shipping association Royal Schuttevaer sees the opportunity to develop a safe harbour. Investigation pointed out this has a negative effect on the water level drop. Therefore this demand is not fulfilled by supervising governments, while it was supported by an executive government. Schuttevaer opposes the plans to permanently link the creeks with the Nieuwe Merwede because they expect negative effects during normal water levels. This group did not influence the design.

The last group are the public companies. They want their facilities to be accessible for maintenance at all time. This is not possible due to the effect of heavy traffic on stability of the dike. The dike around the transformer station is planned as a natural height in the landscape.

Power

Authority

In this project a total of nine stakeholder groups are involved. From these groups three have authority, including the governmental groups. The supervising group consists of a ministry, PDR, a regional department of RWS and a water board. This shows that the supervising governments have national and regional authority. The executive governments consist of the province and the municipality, which have respectively a regional and local authority. The last group with authority are the nature organisations. Due to the inclusion of a local department of Staatsbosbeheer (SBB), the governmental nature manager, this group has local authority.

Finances

The financier of the project is PDR, part of the supervising governments. Furthermore subsidies available for nature development are used for financing realisation of the project (Voortgangsrapportage 17, 2011). This makes PDR the only financier of the project. The recreational development area is not constructed simultaneously the depoldering, but space is reserved for this. Eventual construction of this area must be financed by a private party, which will also be the operator of the recreation facilities.

Land tenure

Figure 7 gives a representation of land tenure per stakeholder on 31st of August 2009. At this time the supervising governments already started to buy land for realisation of the project. Compared to the situation before plans of depoldering it might lead to an overestimation of property of supervising governments and an underestimation of land tenure of residents and farmers.

The supervising governments (grey) are a large land tenant. Especially the high-diked polders and flow-through area are property of this group. All waterways in the project area, as well as the floodplains, are also property of supervising governments. The executive governments (blue) are land tenants of the road network. The current Natura 2000 area and the banks of the creeks are property of SBB, thus of the nature organisations (green). The eastern part of Noordwaard is currently still mostly property of residents (light green). This area includes parts of the intertidal area, wet grasslands, Fort Steurgat and polder Steenenmuur. Many residents are also farmers, explaining their large amount of land. Farmers living outside the project area (light yellow) are land tenants of wet grasslands and small other parcels. The reservation for a recreation area is also located at land of a farmer. Furthermore some private institutions (purple) are land tenants, mostly at the location of public services (transformer station) and in and around polder Steenenmuur. The canal around the fort is also property of a private party.



Figure 7: Land tenure Noordwaard August 2009 (adapted in Google Earth)

Specific knowledge

Knowledge is useful when it can contribute to realisation of the project. The supervising governments are experienced in realising project, even though this project has the status of a leading project. They also know which permits are needed to make realisation possible. Due to inclusion of the Ministry of ANF knowledge is gained on nature and agriculture. One of the duties of executive governments considers spatial planning, experience that can be used in this project. These governments are more bound to the project area and have knowledge on local and regional demands. The other stakeholders, except the inland shipping association and public companies, are also bound to the area and have local knowledge about their specific subject. Because residents include farmers they also have knowledge about agriculture.

Conclusion

The analysis of power of the stakeholders showed that the supervising governments have the highest power position. This group has all power means at a high level. Including the Ministry increased the

knowledge on agriculture and nature in this group, two important aspects of the project and added an extra stakeholder with national authority.

Groups with a medium-high power position are executive governments, nature organisations and residents of the area. Executive governments have authority and knowledge that contributes to the realisation of the project. However, they are a small land tenant and are not involved in financing the project. Nature organisations benefit from the inclusion of SBB. This adds authority and land tenure to the group and increases their power position. Residents of Noordwaard are given this position because they are a large land tenant and have useful specific knowledge because of the combination with agriculture.

Farmers are given a medium power position. Their specific knowledge on agriculture is useful and they are land tenants of several parcels. Residents of Steurgat are the land tenants of the fort and residential areas in the northeast. The fort must be preserved because of its monumental status. Their land is not important for realisation of the depoldering. Therefore the residents of Steurgat have a low-medium power position. Recreation organisations also have a low-medium power position due to their specific knowledge. Even though the public companies are a small land tenant, they have a low power position because their land and other power aspects are not useful for realisation. Also the inland shipping association has little power because their specific knowledge is already taken into account during composition of the PKB. Table 3 shows an overview of the stakeholders and their power position.

Table 3: Overview power position depoldering Noordwaard

Stakeholder	Power Position
1. Supervising Governments	High
2. Executive Governments	Medium-High
3. Nature organisations	Medium-High
4. Residents Noordwaard	Medium-High
5. Residents Steurgat	Low-Medium
6. Farmers	Medium
7. Recreation organisations	Low-Medium
8. Inland shipping association	Low
9. Public Companies	Low

Relations

Relations between stakeholders are schematically represented in Figure 8. This diagram points out that the supervising governments, including the initiator, has a conflict with farmers and residents. This conflict mostly considers the uncertainty about compensation. With the inland shipping association opposite interests are seen about the safe harbour. Public companies have accepted the fact that their utilities are not always accessible for heavy traffic. With residents of Steurgat a compromise is reached about the height of the dike and the dike improvement. With other stakeholders good relations exist, mostly due to equal interests and interests.

The demand for recreation of executive governments results in a stressed relation with residents, mainly because they fear a worsening of accessibility and an increase in traffic. No relation is seen with public companies, the other stakeholder have a good relation with this group. This is due to their interests in nature development as well as recreation development.

Nature organisations show good relations with all stakeholders they have relations with, except for the recreation organisations. The interest for no disturbance of nature can be influenced by recreation, leading to opposite interests. Also the demand of recreation organisations for intensive recreation is not supported by this group. All other groups are positive about plans for nature development in this phase.

Farmers have good relations with all groups except for the supervising governments. The good relations mostly result from the demand for developing recreational side activities on farms that was granted in a previous phase. With nature organisations an agreement is made about layout of the several polders in earlier phases. With the supervising governments a conflict is seen about compensation.

The two resident groups show tensed relations with the recreation sector and executive governments. This results mostly from the intensive recreation that is planned near Werkendam and the associated nuisance due to traffic increase and noise residents fear. Residents of Noordwaard also have a conflict with supervising governments about compensation.

Public companies and the inland shipping association have very specific interests and have hardly any relations with other stakeholders. The public companies have accepted the fact that their facilities are not accessible for heavy traffic at all times. The plans of a safe harbour are supported by the executive governments, but at the planned location it has a negative effect on the hydraulic objective.

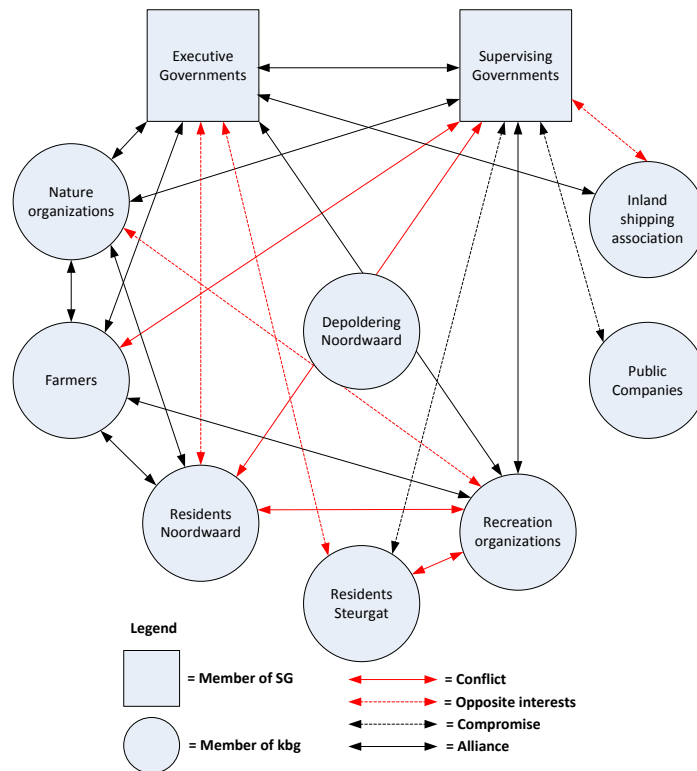


Figure 8: Relation scheme depoldering Noordwaard SNIP 3

The interactive role of stakeholders is analysed with the participation ladder. In this project the supervising governments includes the initiator, which is RWS. The executive governments are partner of this group in the SG. Together they are advised by groups in the kbg. The depoldering project includes the secondary projects of the dike around the fort and dike improvement at Steurgat. Residents of Steurgat are consulted for the new dike and dike improvement because this directly affects their environment. Other consultants are the inland shipping association and public companies because they are specifically involved for their interests. Thus, these three stakeholders are not part of the interactive process because they are only consulted on specific subjects. They are added to the project for these specific subjects. Due to this it is doubtful if the process is completely interactive. The remark must be made that it is questionable if the consulting stakeholders would benefit from and demand a more participative role.

Table 4: Overview relations SNIP 3 depoldering Noordwaard

Stakeholder	Alliance	Conflict	Role participant
1. Supervising Governments	2,3,7	4,6	Initiator, Partner
2. Executive Governments	1,3,6,7,8		Partner
3. Nature organisations	1,2,4,6		Advisor
4. Residents Noordwaard	3,6	1	Advisor
5. Residents Steurgat			Consultant
6. Farmers	3,4,7	1	Advisor
7. Recreation organisations	1,2,6		Advisor
8. Inland shipping association	2		Consultant
9. Public companies			Consultant

Conclusion

Comparing the characteristics of stakeholders several remarks can be made. In this paragraph the fulfilment of the interests is compared with the different characteristics of the stakeholders. A schematic overview of all characteristics is given in Appendix B.2.

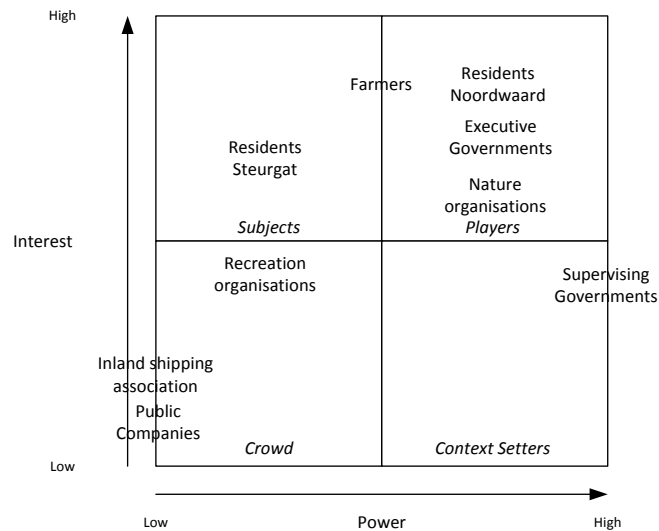


Figure 9: Power-Interest Diagram Noordwaard

Figure 9 shows a power-interest diagram (PID) for the SNIP 3 phase. The PID points out three players in this project. Executive governments have high interest in the project because the opportunities for development of the area, especially for recreational purposes. Executive governments have good relations with two other stakeholders with much power: nature organisations and supervising governments. Interest of supervising governments is that the project realises the hydraulic objective within stated boundaries. Nature organisations have much interest because in the project area Natura 2000 and EMS is realised. Furthermore the Biesbosch has much natural value and this group sees the opportunity for further nature development. These three groups also have a good relation with each other.

Another powerful stakeholder group are residents of Noordwaard. This group has high interest because the project directly affects their living and working environment. The latter also counts for farmers. These two stakeholders have a conflict with the powerful supervising governments about compensation. Residents also have a stressed relation with executive governments about recreation. Farmers have used the interest of executive governments to improve recreation for their benefit. Another group that has used that interest of executive governments are recreation organisations. They have a rather low power position but with a good relation with powerful governmental stakeholders they see most demands back in the design. This good relation is a result of equal interests.

Residents of Steurgat have no explicitly good or bad relations with other stakeholders. However, they do see their most important interest of lowering the dike back in the design. Also in the dike improvement their interests are granted as much as possible within safety standards.

The interests of public companies and inland shipping association could not be granted within requirements of dike stability (public companies) or effect on hydraulics (inland shipping association).

2.1.4. Conclusion

Independent variables

The chosen independent variables for this project are a proposed land use of nature combined with agriculture, while the hydraulic objective will be realised by depoldering and the initiator is a public party.

Land use

The combination of agriculture and nature favours interests of residents of Noordwaard, farmers, nature organisations and executive governments. Recreation organisations see opportunities for extensive recreation due to nature. By appointing these land uses specific knowledge on nature and agriculture became more useful, resulting in higher power of supervising governments, nature organisations, residents of Noordwaard and farmers. The supervising governments benefit from the inclusion of the Ministry of ANF and residents of Noordwaard from the farmers living in the area.

The design shows the land uses have determined the layout of the polders. The polders in the flow-through area are appointed as nature, polders outside the flow-through area focus on agriculture. In the

flow-through area also polders are seen with agricultural nature management, combining the land uses. Agriculture only influences the specific polders, while appointing nature has resulted in various developments in the flow-through area. The possibilities for nature were decisive for the choice for several smaller polders, while from agricultural perspective there was a demand for larger polders. Nature development is also the reason for an open connection with the Nieuwe Merwede.

The mentioned facets of the design resulting from the proposed land use were included before SNIP 2a. In SNIP 3 nature development initiated the change to more channels in the wet grassland areas with a natural layout. Agricultural motives caused the change to a lower water level in the dry grasslands in the flow-through area.

Measure

Choosing depoldering created room to grant several interests, like development of nature and recreation. Depoldering also influences the distribution of land tenure, because certain areas are essential for realisation. The flow-through area forms the backbone of the depoldering and is property of residents of Noordwaard, farmers and nature organisations. This increases their power position. Because of resulting compensation conflict occurs between supervising governments and the farmers and residents.

Choosing for depoldering largely influenced the layout of the design. Without this, the flow-through area would not be created, having a large effect on opportunities for nature development. Also excavation of former creeks and developing intensive recreation would not be possible without depoldering, while creation of a dike around the fort would not be needed.

Change of the design in SNIP 3 resulting directly from depoldering is the appointment of new locations for housing. This would not be needed if depoldering was not realised.

Initiator

The last independent variable is the type of initiator. In this project RWS is the initiator, a public party. Depoldering is carried out according the SNIP-procedure and stakeholders were grouped in an SG and kbg. RWS is part of the supervising governments and is seated in the SG. Due to this the interactive role of supervising governments includes the initiator, while other parties in the SG are a partner of the initiator.

In the design no direct influences of the choice for this initiator are seen. The interest of its group is that the design complies with the stated boundaries, like the hydraulic objective. The design could not be approved if this demand was not fulfilled.

Changes made in SNIP 3 show replacement of nature from the centre of the flow-through area to the outsides is needed to comply with nature conservation laws and to reach the hydraulic objective because its negative impact on the flow.

Contextual factors

Previous phases

In the first phases of the project opposition was seen against the depoldering plans by residents and farmers. However, this opposition was turned into cooperation during the composition of the Design Vision, which was eventually chosen as SNIP 2a Design. This Design Vision was composed by several stakeholders. By allowing stakeholders to work out a collective design and by approving this as SNIP 2a Design compromises were agreed between most stakeholders. In SNIP 3 conflict exists on compensation between supervising governments and the residents of Noordwaard and farmers. Intensive recreation is still doubted, but accepted by residents and farmers as long as it causes as less nuisance as possible.

Influence of cooperation in this phase is that changes in SNIP 3 are already quite detailed. The changes made can generally be considered as further detailing of the SNIP 2a Design.

Leading project

Depoldering Noordwaard was appointed as a leading project in order to start the planning study phase before the definitive decision on the PKB by the parliament was taken. This was done in order to give the desired clarity for the stakeholders and to start the project quickly.

The influence of this contextual factor was that the Noordwaard project was one of the first projects that was carried out. During the project several problems were seen due to the appointment of leading

project. This status indirectly caused the conflict on compensation between the supervising governments, which are responsible for compensation, and the residents and farmers in Noordwaard. Because the project was started earlier there was no general compensation agreement ready for all projects, resulting in uncertainty and conflict about the compensation agreements.

Location

The last contextual factor is the location of the area. The area is located near the Biesbosch nature area where also recreation (intensive and extensive) is present. By depoldering the natural values of the Biesbosch will become more visible in Noordwaard, visually extending the Biesbosch area. The project area is before realisation partly situated in the Natura 2000 area of the Biesbosch. In this part of the project area SBB is the land tenant, so the location partly determined the power position of nature organisations. The Biesbosch is attractive for recreational purposes, focused on experiencing its nature. After realisation Noordwaard will be more attractive for experiencing nature and will face an increase in extensive and intensive recreation. Demand for recreation facilities due to its location increased the power position of recreation organisations because its specific knowledge becomes useful. Due to expected nuisance, the demand for intensive recreation resulted in a conflict between residents and the recreation organisations

Looking at the design it is clear that the location determined which kind of nature will be developed in the flow-through area. Nature development is focused on enhancing the specific Biesbosch values. The demand for recreation results in various hiking and cycling paths through the project area. At Spieringsluis some expansion of current recreation facilities is planned, while the Biesbosch Museum will be expanded. Near Werkendam an area is reserved for larger recreation facilities, like a marina and accommodations.

The changes in SNIP 3 mostly focus on decreasing the negative effects of intensive recreation for residents. This is done by making the entrances of creeks that flow along residential areas narrower and by placing vegetation between boating routes and houses.

2.2. VEESSEN-WAPENVELD

This case study considers construction of a high water channel (hwc) between the towns of Veessen and Wapenveld in the province of Gelderland. A small area around the hamlet of Marle is located in the province of Overijssel. The project consists of construction of the hwc and spatial development. The project area for the spatial development is bounded to the east by the IJssel River and to the west by the Apeldoorns Kanaal. To the north the border is formed by the municipality border of Hattem and Heerde, in the south by some roads. The project area for the hwc is located roughly on the lower grounds of the area. Figure 10 gives an overview of both project areas, where the white line represents the boundary for spatial development. The black lines indicate the area for the hwc as presented in the PKB and the current dike. Currently the project area has a safety standard of 1/1.250 against flooding. Ferries connect the area with Wijhe and for slow traffic only to Fortmond.

The subprojects result from the PKB-phase, where the Eigeman resolution was accepted. This resolution states the project must be led by the province and that broader spatial development would come along with the construction of the hwc (Eerste Kamer der Staten-Generaal, 19-12-2006). For spatial development a distinction is made between projects that are carried out simultaneously with the construction of the hwc and projects that will be carried out later. In this analysis only the projects that are carried out alongside the construction of the hwc are taken into account.

The objective of the hwc is to lower the water level between river km 960.7 and 961.7 and a contribution to spatial quality of the area must be made. Proposed land use of the channel area is agriculture (PKB 4: Vastgesteld Besluit, 2006). The PKB states a water level drop of 63 cm at a discharge of 16.000 m³/s at Lobith. However, updated models showed that for exactly the same measure a water level drop of 71 cm will be reached (Informatiebulletin Veessen-Wapenveld nr.5, 2008). For the analysis the project area of the spatial development is applied.

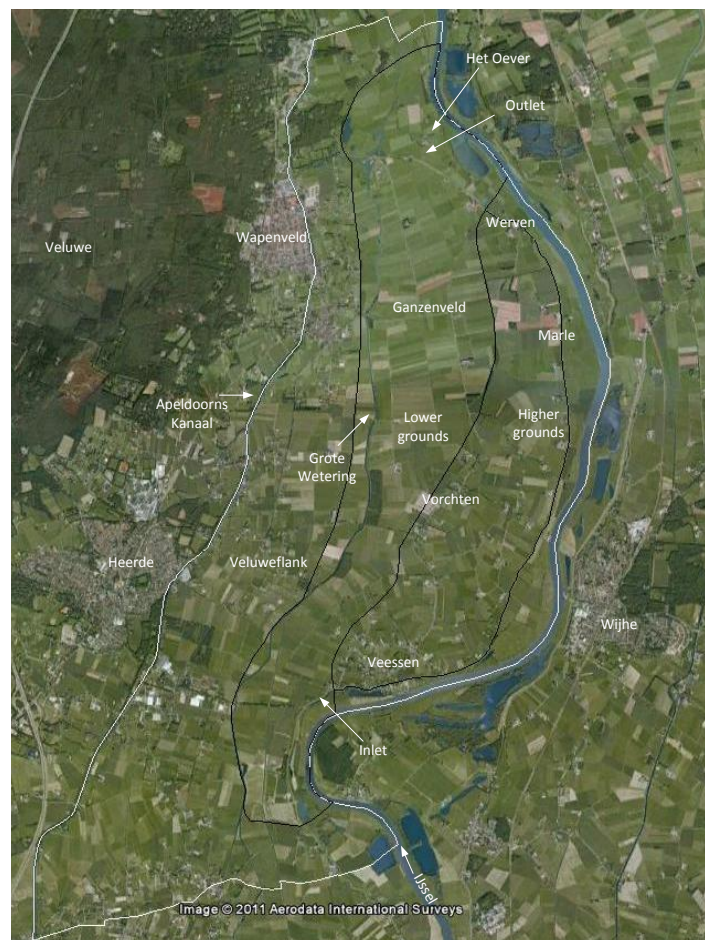


Figure 10: Overview project area Veessen-Wapenveld (edited from Google Earth)

2.2.1. Description Initial situation

Agriculture

Currently agriculture is the largest land user in the area. Most farms in the area are dairy farms, but also arable farming and fruit-growing farms are seen. Average size of the farms in the area is larger than national average and most farms have a good perspective for the future. Agriculture owns 1066 of 1410 ha in the searching area. A quarter of the farms facilitate various side-activities. In total 102 people work on 49 farms. Research pointed out more than 70% is willing to trade ground for a better allotment. Furthermore farmers are satisfied with the current drainage and allotment (LTO Noord, 2008).

Nature

Along the project area several nature protection zones are created to make a transition between the Veluwe and IJssel floodplains. The project area is bounded to the Natura 2000 areas of Veluwe in the west and the IJssel floodplains in the east. The Grote Wetering connects the EMS transition zones to the north and south of the project area. In the northern part of the lower grounds an interweaving EMS zone is located where agriculture and nature are combined to preserve grassland birds (Startnotitie MER hoogwatergeul Veessen-Wapenveld, 2008). The area for the hwc is bounded by agriculture.

Landscape

The project area for spatial development shows different types of landscape. In the west the higher grounds of the Veluwe are located, which gradually change to a floodplain. In between dairy agriculture causes an open landscape. The Apeldoorns Kanaal forms the boundary between the Veluwe and Veluweflank, a transition area between the Veluwe and lower grounds. The Veluweflank is separated from these lower grounds by the Grote Wetering. Towards the river the lower grounds gradually rise again until the dike separates these grounds from the floodplains and the river. Lower grounds are located in the middle of the project area and are characterised as very open due to the existing agriculture (Hoogwatergeul Veessen-Wapenveld SNIP 3, 2011). Construction of the hwc is planned to be carried out in this zone. The landscape near the higher grounds shows some variation in relief, which is part of the cultural heritage.

Living

In the project area several residential areas are located. In the south the village of Veessen is located and just outside the project area the towns of Heerde and Wapenveld. Three hamlets, Vorchten, Marle and Werven, are located between the hwc and the river. Spread over the area more housing is seen, with a higher concentration at the Veluweflank. On the higher grounds in the east several monumental farms are constructed. The villages on the area are very dependent on the town of Heerde for their services (Hoogwatergeul Veessen-Wapenveld SNIP 3, 2011).

Recreation

Currently some recreational facilities are located in the area, mostly with an extensive character. Especially water-related recreation still shows much potential for development. However, the tendency is that recreational visits are decreasing despite the potential of the area (Startnotitie MER hoogwatergeul Veessen-Wapenveld, 2008). In the area some campsites are located and a few bed & breakfasts and a small hotel in Heerde (Advies Gebiedsontwikkeling Veessen-Wapenveld, 2010).

PKB

This project was already proposed in the first phases of the PKB, mostly because of a lack of alternatives (Stuurgroepen Boven- en Benedenrivieren, 2005). The only alternatives were two large scale dike relocations that would lead to the destruction of many houses and would have a large impact on spatial quality. With an hwc the current values of those areas are spared. Furthermore the hwc is important for the long-term objective (PKB 1: Ontwerp PKB & Nota van Toelichting, 2005).

During consultation of the PKB 916 reactions were given on the plan. Many consultations argue the future safety situation; they feel they are locked up. During usage of the hwc the dike is the only connection with other areas and according to consultations this would decrease traffic safety. Other arguments consider degradation of spatial quality because disappearance of the open landscape. The

latter would also affect the occurrence of grassland birds in the area. Effects on agriculture and living are also heavily discussed. Farmers have the feeling they must move to develop nature. Another point that comes up often is that room must be made in the floodplains, where currently nature obstructs the flow. Another proposed alternative dredging of the summer bed. The city council of Heerde also opposes the plans of an hwc (PKB deel 2; inspraak en adviezen, 2005).

PKB 4 includes the plans because no realistic alternatives were available and the measure is has much effect on water level drop upstream. PKB 4 states the open character of the area must be conserved and agriculture must be maintained. To allow agriculture the flooding frequency must be limited, land consolidation must take place and water system must be adapted. Development of nature and recreation must also be taken into account, just like the support for the measure (PKB 4, Nota van Toelichting, 2007).

Opposition during PKB was mostly initiated by residents and farmers. Farmers came up with a report on the effects on agriculture (LTO Noord, 2008) and were united in an interest group. Also the residents united themselves in an interest group. Together these groups proposed a new variant for the hwc. The municipality and water board also opposed the plans.

During discussion of the PKB in the Senate the Eigeman resolution was proposed. This resulted in an administrative agreement with the Province of Gelderland as initiator of the project, which was signed in October 2007. However, including this in the plans resulted in a delay of about a year. In March 2008 a Scheme of Approach was approved in order to start the SNIP 2a phase.

SNIP 2a

The planning study was officially started in November 2008 with the publication of the EIA Starting Note, including 4 variants of the hwc. Three variants were proposed by the project team, one variant was proposed by the interest groups of residents and farmers. This last variant was adapted by the project team to fit within the stated boundaries. However, this was not done satisfactory according the creators of the alternative (Grontmij, 2009). The variants of the project team focus on minimal intervention, optimisation for dairy farms in the channel and a channel that fits best in the landscape. The variant of residents and farmers is based on current agricultural structure with a maximum distance between dikes and villages. For spatial development of the area several projects were analysed. In the end a distinction was made between projects that could be realised alongside the hwc and projects that have to be realised later (Adviesnota variantkeuzebeslissing Hoogwatergeul Veessen-Wapenveld, 2010).

During composition of the variants some discussion points were brought forward, which were the flooding frequency of the channel and the type of in- and outlet. Location and profile of the dikes were discussed too, as well as the flexibility to adapt the channel in the future. The kbg has four points of concern for the SNIP 2a Design: compensation, farms just outside the channel, areas near Veessen and Vorchten and the accessibility of the area during use of the channel (Adviesnota variantkeuzebeslissing Hoogwatergeul Veessen-Wapenveld, 2010).

During SNIP 2 representatives of the agricultural sector felt their input was not used in the project and that nature conservation was more important than their interests. Result of this is that these representatives stepped out of the kbg (De Stentor, 2009). In the second half of 2009 it was decided that after the SNIP 2a decision the contract with the engineering company would be terminated because results of investigations were delivered too late. This resulted in another delay (Voortgangsrapportage 15, 2010).

In the end the SNIP 2a Decision was taken by the Minister in May 2010. Next to the approval, the Minister also added the task to investigate possibilities to reduce costs, to improve manageability and reliability of the inlet and to speed up realisation (Hoogwatergeul Veessen-Wapenveld SNIP 3, 2011).

2.2.2. Comparison SNIP 2a & SNIP 3 Designs

Description SNIP 2a Design

The approved SNIP 2a Design is seen in Figure 11. In this phase the choice was made for a flooding frequency of the channel of 1/100 years and for dikes with a slope of 1:3. The in- and outlet of the hwc will be fixed with an additional mechanism. To decrease the time to empty the channel pumping stations are added. In the channel a ditch is excavated, based on current allotment. The eastern dike roughly follows contours of the transition in the landscape between the lower and higher grounds. The EMS-area for grassland birds is located between the dikes, but the layout hardly faces any change. Near Werven the

dike does not follow the landscape contour anymore. The western dike follows the Grote Wetering, with some space between the waterway and the dike to guarantee dike stability. Parts of the Grote Wetering have to be shifted, especially near the inlet. The zone between the Grote Wetering and dike shows nature development. Within the channel also three dwelling mounds are created for farmers.

To guarantee accessibility during usage of the channels bridges will be constructed at the in- and outlet. In the channel are two new roads and two new cycling paths are constructed from Veessen and Vorchten to Heerde. Between Veessen and the dike another new road is planned. Another cycling path is made on top and next to the western dike. This path crosses the dike at the outlet and continues towards Hattem. There is also a flood-resistant road constructed from Het Oever towards Werven, at the lake near Het Oever a small beach is planned. Along the Apeldoorns Kanaal and the Grote Wetering a canoe route is created, with some connections to allow different distances. This canoe route is connected with the IJssel in the new floodplain. The layout of this floodplain has to be specified, as well as the new dike zone near Veessen and Vorchten. Near the outlet a recreational area is planned, which needs further specification too. On the higher grounds the former course of the IJssel is made visible with vegetation.

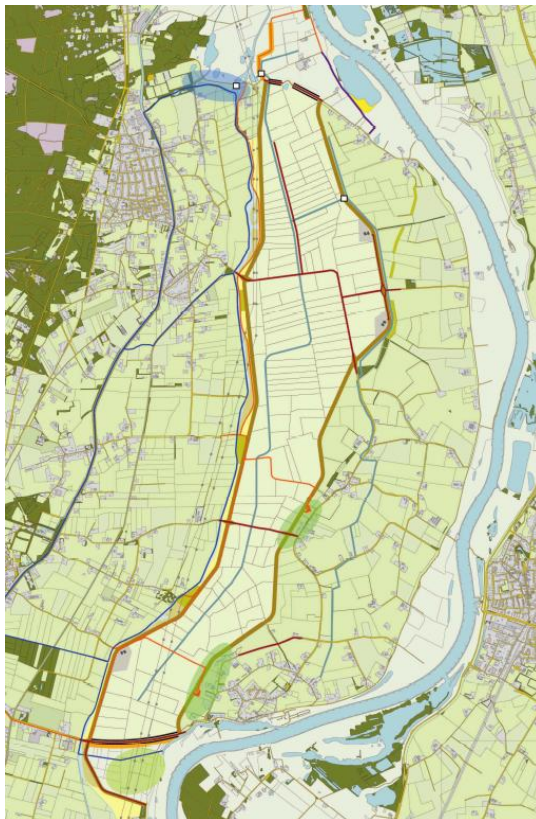


Figure 11: SNIP 2a Design Veessen-Wapenveld

Description SNIP 3 Design

The SNIP 3 Design is shown in Figure 12. The flooding frequency of the channel remains 1/100 years. A new water system is created in the channel area and paths are made to access the channel area. Small inlets are needed to allow water from the Grote Wetering to grounds near Veessen. Furthermore two pumping stations are added. The outer slope of the dike will be 1:3 due to erosion and wave action, while the inner slope becomes 1:2.5. The eastern dike roughly follows the transition between the lower and higher grounds and is located as west as possible. The EMS area must remain open, so the dike is located more eastward there. The western dike follows the course of the Grote Wetering, near Vorchten a small adaptation must be made in the course. Between the western dike and the Grote Wetering a zone is planned for nature development to compensate nature loss in the hwc. The inlet is constructed as a dike with valves that can go down when the operating mechanism fails. The outlet is formed by a dike and a culvert that opens when water pressure in the channel exceeds water pressure in the floodplain. Furthermore a dwelling mound is created outside the channel.

At the in- and outlet the dikes are excavated and bridges will be constructed to access the eastern part. The road network in the northern part of the channel largely remains intact. Near Vorchten a second road crosses the channel with maintenance of current vegetation along this road. Cycling paths are created in the area to connect the villages. Away from residential areas other cycling paths are created on top of the dike. To prevent disruption for nature the cycling path on top of the dike is removed to the nature zone near the EMS area. To watch the grassland birds a bird-viewing hut is created on top of the dike. Along the Apeldoorns Kanaal and Grote Wetering a canoe route is created with two connections between the waterways. At the inlet the new floodplain will be used for agriculture, but also a hiking path is made in this area. Between Vorchten and the dike some orchards will be placed and a small strip of trees is planted along the former course of the IJssel.

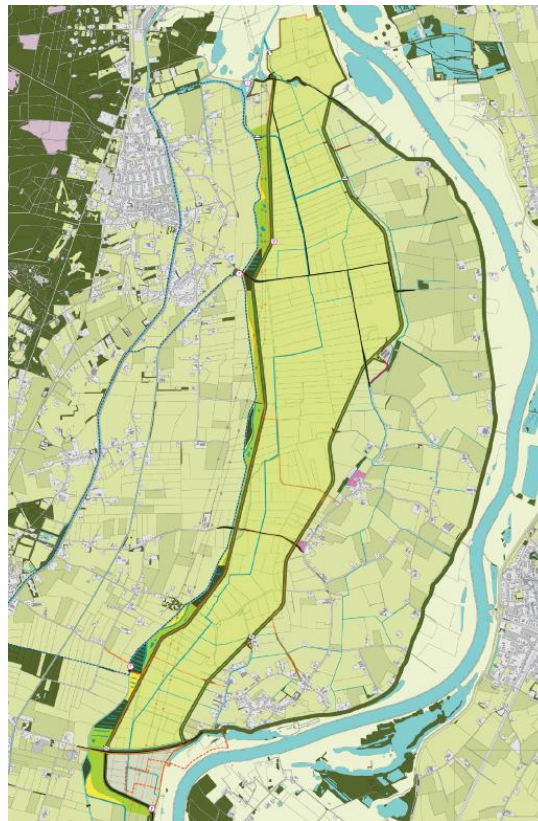


Figure 12: SNIP 3 Design Veessen-Wapenveld

Comparison

After describing both designs a comparison is made to investigate changes. One of these changes considers the course of the dikes. Near the inlet the western dike is located more eastward, so the Grote Wetering does not have to be adapted. Near Veessen and Werven the eastern dike is located as westward as possible to create more room between residential areas and the dike. At Vorchten this was not possible, so orchards are planned to take the dike out of view. In the SNIP 2a Design three dwelling mounds were planned, in SNIP 3 one dwelling mound remains. This dwelling mound is not located in the channel anymore, but on the outside of the dike. In the SNIP 3 design the slope of the inner dike is changed to 1:2.5 to save ground and thus costs.

In the SNIP 3 phase more clarity was obtained on the influence of the hwc on the water system. Small inlets were included in the southern part to prevent drought and frost damages and for replenishment of the water system near Veessen. In the north the pumping stations changed position, a direct result from some adaptations in the water system in the channel that shows more ditches in the SNIP 3 Design.

The road network shows some adaptations in the latest design. In the north the road in the channel is connected with the road on the current dike and the turn in the road is removed. A planned new road at Veessen is also removed from the design, while the cycling paths also see some changes. The flood-resistant road to Het Oever is removed, as well as the cycling path between Het Oever and the river and the small beach. Also a small dike will be constructed around Het Oever. The cycling path at the western

dike is located on top of the dike after passing the EMS area and the connection of this cycling path with Veessen and Vorchten is also changed. The layout of the nature area along the Grote Wetering has been altered. Some small scale recreational facilities are included in the SNIP 3 Design, like a bird-viewing point and an information centre at the outlet. In the new floodplain at the inlet a walking path is planned. Furthermore the canoe route is not linked with the river anymore. Most vegetation that accentuates the old course of the IJssel is also removed.

2.2.3. Characteristics Stakeholders

This project consists of several stakeholders, grouped in an SG and kbg. The initiator of the project is the Province of Gelderland, indicated in the Eigeman resolution. Other executive governments involved are the municipalities of Heerde and Hattem. The municipality of Olst-Wijhe is only informed on issues considering their territory near Marle. The Water Board Veluwe, PDR and the Ministry of Infrastructure and the Environment are also seated in the SG. For the spatial development project the municipality of Heerde is responsible. In the kbg several organisations are seated. These organisations are grouped in residents, nature organisations and recreation organisations. Representatives of local companies is included in the residents, nature organisations contain a group for cultural heritage. Farmers left the kbg in September 2009, but are still consulted on specific subjects (Provincie Gelderland, 2010). Because of this the farmers are still accounted for in the analysis.

Interests

An overview of the interests of the stakeholders is given in Table 19 in Appendix C.1, together with some background. The described aspects of the design consider the SNIP 3 Design.

Supervising governments want a realised project within stated time and budget. In the design several features can be contributed to this group. To save costs the slope of the dike and the inlet were adapted. Costs also resulted in a rather straight route of the western dike. The zone between the Grote Wetering and western dike is used for compensation of natural values.

Realising EMS between Grote Wetering and the dike is favoured by the executive governments, just like conservation of the Ganzenveld area. The demand to keep contours of the landscape visible resulted in the route of the eastern dike, which roughly follows the transition from lower to higher ground. The executive governments also support development of recreational facilities. Some facilities for extensive recreation are included in the SNIP 3 Design, but the spatial development plan investigates the development of more intensive recreation. The area between the hwc and river remains permanently accessible by constructing bridges at the in- and outlet.

Nature organisations also favour conservation of the EMS area for grassland birds, which is done by shifting the eastern dike eastward. Another influence of nature organisations is the layout of the zone between Grote Wetering and the western dike. The former river course of the river is slightly accentuated with vegetation and near Ganzenveld a bird-viewing hut is planned.

Residents favour a channel that is located away from residential areas as much as possible to preserve the openness of the landscape. This demand caused the route of the eastern dike to be shifted westward, mainly near Veessen and Werven. Near Vorchten this was not possible but the dikes are taken out of sight by creating orchards. Accessibility is guaranteed at all times with bridges at the in- and outlet. During normal water conditions the road network connects the villages in the east with Heerde and Wapenveld. A separate network of cycling paths is made for reasons of traffic safety. Along the road from Vorchten to Heerde characteristic vegetation is maintained. Two interests that could not be translated in the design are the compensation issue and the discussion on construction roads, a result from the demand of the supervising governments to speed up the project.

Even though farmers are not seated in the kbg, their influence can be seen on the design. Their interests consider a good future perspective for their farms. This is partly realised by allowing a flooding frequency of the channel of 1/100 years. The western dike is largely shifted behind the Grote Wetering to keep allotment west of that channel intact. The layout of the channel area is arranged to favour agricultural land use. This resulted in a new water system and roads for agricultural traffic to enter the channel area. Land consolidation is not visible in the design. East of the channel the water system is also adapted. Another interest that cannot be translated in the design is compensation for the measure.

Recreation organisations partly want to improve recreational infrastructure of the area. In the design this is visible by the construction of a hiking path and several cycling paths. Also the canoe route and

some small scale recreational facilities are the influence of this group on the design. Their demand for more intensive recreation is dealt with in the spatial development plan.

Power

Authority

In this project several governmental organisations are involved. The supervising group consists of the Ministry of I&E, the water board and PDR. This leads to a national and regional authority level. The executive governments consist of the province and municipalities, stakeholders with a regional and local authority. Other groups do not include stakeholders with any authority.

Finances

The project consists of two sub-projects: the construction of a high water channel and a plan for spatial development of the area. Some overlap is seen between these projects, but their funding is different. For the construction of the channel the supervising governments contribute most due to the inclusion of PDR and the Ministry of I&E in this group. The executive governments partly finance the channel-project, but mostly for parts also included in the spatial development plans.

Land tenure

Farmers and residents are the stakeholders with most land tenure, which is visible in Figure 13. This Figure is based on land use because no data could be retrieved on land tenure. Little land is leased to other stakeholders (Kadaster Ruimte en Advies, 2010), so land use gives a fairly reliable approximation of land tenure. Because the actual land tenants are not known, land tenure of farmers will be overestimated at the expense of residents. The data is retrieved in February 2010 from a report of the Land Registry.

Some areas are already bought by the supervising governments (grey) for realisation. Ditches and other waterways are also property of the supervising governments, as well as the summer bed of the river. Executive governments (blue) are the land tenants of the road network, while near Vorchten and Wapenveld land is planned for housing. Sports parks are also property of this group. Nature organisations (dark green) have some land spread through the project area, with a small parcel located in the channel area. Land of residents concentrates at the Veluweflank and at the higher grounds. In the channel area some residential areas are located. Farmers are the largest land tenant in the area, especially at the lower grounds which includes the high water channel. Recreation organisations (yellow) are the land tenants of camp sites and the marina of Veessen. Other parcels are property of private institutions (purple).



Figure 13: Land tenure Veessen-Wapenveld (adapted in Google Earth) (Kadaster Ruimte en Advies, 2010)

Specific knowledge

Specific knowledge may contribute to a successful realisation of the project. By including the Ministry of I&E the supervising governments gained knowledge on spatial planning, the environment and infrastructure. This group also has expertise on the realisation of projects. Executive governments have more insight in the demands from the region. Farmers and residents have knowledge on agriculture and the local situation, both useful in the project. Recreation and nature organisations can use their specific knowledge on the nature and recreation subjects, but the focus on these subjects is rather small.

Conclusion

Even though the land tenure of the supervising governments is rather small, their power position was indicated as high because their high levels of authority, their financing position and useful knowledge. The authority of executive governments is lower, just like their land tenure. Because of their useful knowledge and contribution to funding the project their power position is assigned as medium-high. Farmers have an equal position as executive governments due to land tenure. Their specific knowledge is also useful for realisation of the project. Residents have various parcels, also in the channel area, that increase their power position. Their specific knowledge is also useful, resulting in a medium power position. Nature and recreation organisation are both small land tenants and their specific knowledge is less needed in this project. Therefore their power position is assigned as low.

Table 5: Overview power position high water channel Veessen-Wapenveld

Stakeholder	Power Position
1. Supervising Governments	High
2. Executive Governments	Medium-High
3. Nature organisations	Low
4. Residents	Medium
5. Farmers	Medium-High
6. Recreation organisations	Low

Relations

The relations of stakeholders are represented in Figure 14. This Figure shows that all stakeholders have relations with the other stakeholders, with exception of the farmers. Farmers left the kbg, but are still consulted about certain subjects by the SG.

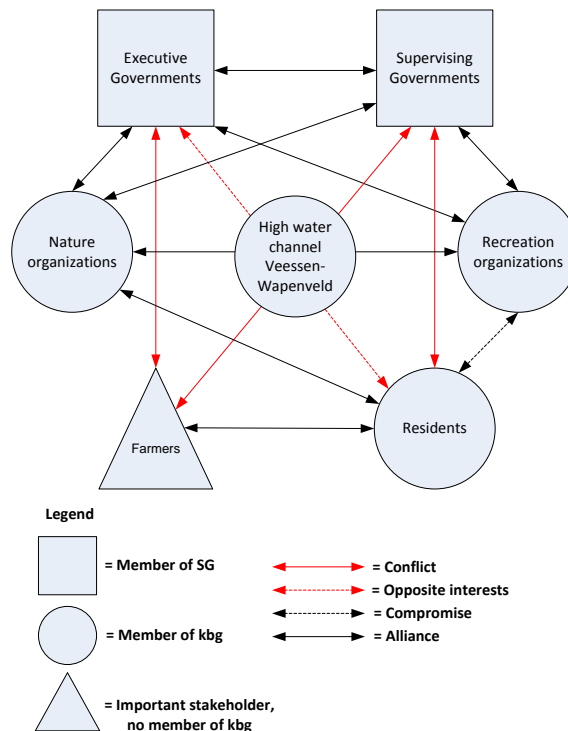


Figure 14: Relation scheme high water channel Veessen-Wapenveld

The supervising governments are responsible for compensation and land consolidation, which are important subjects for farmers and residents. Due to uncertainty on these subjects conflict occurred between the supervising governments and these two groups. With other stakeholders cooperation is seen because the project offers opportunities to fulfil certain demands.

Executive governments include the Province of Gelderland, initiator of the project. This group cooperates with supervising governments and nature and recreation organisations. The last two groups have shared interests, while the supervising governments are a partner in the SG. Farmers and residents partly oppose realisation of the project because they feel it is not in their interest. Farmers feel the initiator does not listen to them, which resulted in a conflict and in farmers leaving the kbg after submission of the SNIP 2a Design. Uncertainty about compensation results in a stressed relation between executive governments and residents.

Farmers have little interaction with other stakeholders because they stepped out of the kbg. They are still contacted by the SG on aspects that directly affect them, but the relation remains tense. Conflict is seen with the executive and supervising governments. The first conflict was already discussed, the second conflict result from the fact supervising governments are responsible for land consolidation and compensation. Overlap is seen with interests of residents, so the good relation is maintained.

Residents have good relations with farmers and nature organisations, mostly for preserving the open and agricultural landscape. No concrete plans for intensive recreation are currently seen, resulting in a compromise between residents and recreation organisations. Improving recreational infrastructure is supported by residents because of the possibility to improve traffic safety. During the SNIP 3 phase residents started to accept the plans and started to see possibilities to benefit from the project.

Nature organisations have a good relation with all the stakeholders they interact with. Governmental parties see overlap between interests of nature organisations and guidelines for nature compensation. Nature organisations want to maintain the current landscape. Nature compensation is also favoured by recreation organisations because possibilities for extensive recreation. Recreational organisations have good relations with stakeholders, because only extensive recreation will be developed in this project.

The interactive role of stakeholders analyses interaction between stakeholder and initiator. Executive governments have two roles, the initiating role because of the inclusion of the province and the role of partner because the other group members are part of the SG. Other partners in the SG are supervising governments. The SG asks advice from the kbg to improve the design. The farmers stepped out of the kbg, resulting in a non-interactive role because they are only consulted on fixed subjects. Table 6 gives an overview on the different relations between stakeholders.

Table 6: Overview relations SNIP 3 Veessen-Wapenveld

Stakeholder	Alliance	Conflict	Role participant
1. Supervising Governments	2,3,6	4,5	Partner
2. Executive Governments	1,3,6	5	Initiator, Partner
3. Nature organisations	1,2,4,6		Advisor
4. Residents	3,5	1	Advisor
5. Farmers	4	1,2	Consultant
6. Recreation organisations	1,2,3		Advisor

Conclusion

Characteristics can be related to each other by constructing a Power-Interest Diagram of the SNIP 3 phase, shown in Figure 15. The interest of executive governments is high because the project gives the opportunity for realising several interests in the area. Supervising governments have a rather high interest because of the scale of the measure. Farmers have a high interest because the project affects their working and living environment, the latter also counts for residents. Nature and recreation organisations have lower interest because the project offers relatively few opportunities for their demands.

The farmers are a group with much power and interest and must be taken into account by the initiator. This explains why this group is still consulted after they voluntarily left the kbg. It is also likely that farmers were beware of their position and wanted to make a statement by stepping out of the kbg. The PID also points out that this group benefits from its shared interests with the executive governments. This improved the relation with a powerful stakeholder, which can use the specific knowledge of nature and

recreation organisations for realising its interests. The PID also points out conflicts between stakeholders with high power and with high interest.

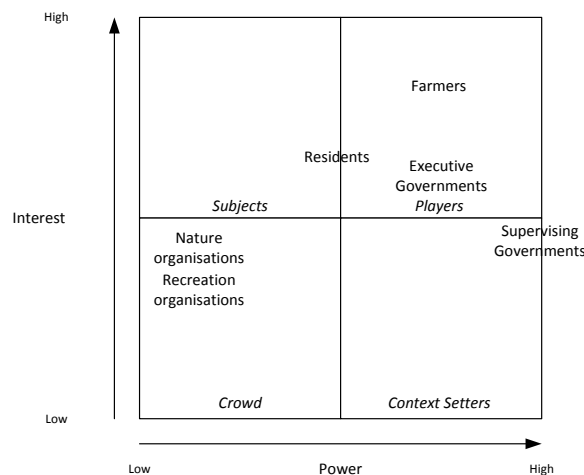


Figure 15: Power-Interest Diagram Veessen-Wapenveld

2.2.4. Conclusion

Independent variables

The PKB states agriculture must be maintained in the channel area. Furthermore the Province of Gelderland is initiator of the project, which was proposed in the Eigeman resolution in the Senate.

Land use

Preferring agricultural land use in the channel favoured interests of residents and farmers. It increased the power position of residents and farmers too because their specific knowledge about local agriculture.

The channel area in SNIP 3 is designed for agricultural use and the flooding frequency is adapted to make agriculture profitable. For drainage a new water system is designed and entrances to parcels are made for agricultural traffic. The dwelling mound also results from choosing agriculture. Current allotment will be conserved if possible.

The adaptations in the water system and relocation of pumping stations can be attributed to this preferred land use. The removal of dwelling mounds leaves more land to be used for agriculture.

Measure

The choice for a high water channel started the process. Interests that result from choosing this measure are demands for compensation and land consolidation. These interests also resulted in conflict between the demanding stakeholders and the supervising governments. Farmers are not willing to sell land to the government because they fear no agriculture will be created, indicating distrust between farmers and supervising governments. The measure also increased the power position of farmers and residents, because their lands are necessary for realisation.

In the design the type of measure results in two dikes in the landscape. Therefore, a new water system must be created in the channel area. Especially the eastern dike affects allotment, while the western dike has less influence on allotment due to the location near the Grote Wetering. For dike stability a buffer is needed between the Grote Wetering and the dike, which is used for nature development.

The change in SNIP 3 to shift the western dike results from the type of measure. This shift is made to maintain current allotment west of the Grote Wetering. Near Veessen and Werven the eastern dike is shifted more westward to increase the space between these residential areas and the dike. At Vorchten orchards make the dike less visible because the dike could not be shifted due to hydraulic reasons.

Initiator

The province is appointed by the Eigeman resolution as initiator, leading to inclusion of the initiator role in the executive governments together with the role of partner. The SG also includes supervising governments, giving this group the interactive status of partner. The initiator installed a kbg, so the

involved groups have the role of advisor. By installing an SG and kbg relations between all involved groups are seen. The conflict between initiator and farmers causes a tense relation of the farmers with the executive governments.

In the design some interests of the initiator are visible, like realising EMS between Grote Wetering and the western dike. Recreational facilities are seen, while the eastern dike follows the contours of the landscape, making the transition from lower to higher grounds more visible. This dike route also respects the boundaries of the EMS area of Ganzenveld. The road network is also adapted to guarantee accessibility at all times of the area east of the channel.

The adaptation in SNIP 3 that can be assigned to the initiator is the adaptation of the road network and cycling paths to respect the EMS area and respect accessibility of the villages. Also the development of small scale recreation is supported by this group.

Contextual factors

Previous phase

A contextual factor is the previous phase of the project. Since proposition of the measure opposition is seen amongst residents and farmers. Various arguments are used to prevent the plan, like the feeling the measure has to be carried out to conserve nature in the floodplain. After the PKB discussion residents and farmers came up with an alternative. This alternative was not chosen as SNIP 2a Design, which increased the feeling that nothing was done with initiatives of local stakeholders. The conflict with farmers eventually escalated and this group left the kbg after submission of the SNIP 2a Design. This decreased the amount of relations the farmers maintain. However, this group is still consulted on specific subjects, likely because of their high power position.

Some changes in SNIP 3 favour interests of farmers and residents. The water system in the project area is adapted for agricultural purposes and allotment west of the channel is maintained. Removing two dwelling mounds made possible to narrow the channel at the inlet and near Werven, making shifts in the dike route possible. This indicates that leaving the kbg might help to see demands granted.

Eigeman resolution

The Eigeman resolution proposed the province as initiator and states that spatial development must take place next to the construction of the channel. The influence of choosing the province as initiator is already discussed. The plan for spatial development investigates development of nature and recreation that can be carried out alongside or after the construction of the channel. With this resolution the power of recreation and nature organisations decreased because their specific knowledge is less useful for realising the high water channel. It also leads to fewer interests considering these developments. Aspects of spatial development that will be carried out along with constructing the channel mostly consider extensive recreation, leading to a compromise between residents and recreation organisations.

The Eigeman resolution resulted in plans for recreation and nature development. Nature development is planned along the Grote Wetering. Through the area facets for recreation are visible, like separate cycling paths, a canoe route and some small facilities. Changes in SNIP 3 do not favour these subjects.

Location

The last contextual factor is the location of the measure. The area is located in a rural area, but along the project area the landscapes of Veluwe and IJssel are located. Due to these landscapes recreation can be encouraged. At the IJssel more intensive recreation focused on water may be realised, while the Veluwe is more interesting for accommodations. However, also extensive recreation can benefit from the mentioned landscapes. The planned cycling paths and canoe route focus on experiencing the landscape between the river and Veluwe. Due to the Eigeman resolution more recreational development is part of the spatial development plan.

The channel is located at lower grounds in the area. Residents between the channel and river are dependent on the villages of Heerde and Wapenveld for their services, making accessibility an even more important issue. This issue is partly resolved by creating two bridges at the in- and outlet, and by focusing the road network and cycling paths on the connection between the villages.

2.3. RUIMTE VOOR DE LEK

The next project study is the 'Ruimte voor de Lek' project (Room for the Lek River, RvdL). This floodplain excavation is carried out near Nieuwegein and Vianen in the province of Utrecht. The project area consists of several floodplains and is bounded to the north, west and south by dikes and locks. In the east the Hagestein barrier and the dam form the boundary of the project area. The area is located at crossings of road and water transport. The Lek and Merwede Canals are part of the inland shipping route between Amsterdam and Rotterdam, while the highways A2 and A27 are important for the Dutch road network. The Hagestein barrier is one of the key elements of the Dutch water system. The project area was confined in October 2008 because investigated measures in surrounding floodplains did not lead to a water level drop that would make dike improvements near the project area needless. The resulting project area is given in Figure 16.

The hydraulic objective as stated in the PKB is to lower the water level at river km 945.2 and 946.2 with 6 cm. This must be reached by excavating the floodplain and by lowering summer dikes and the dam. The proposed land use after realisation is nature combined with recreation (PKB 4: Vastgesteld Besluit, 2006). In the SNIP 2a Decision the hydraulic objective was raised to a lowering of 8 cm to compensate for higher roughness due to nature development (Hoofdrapport MER (Concept), 2011).



Figure 16: Overview project area 'Ruimte voor de Lek' (edited from Google Earth)

2.3.1. Description initial situation

Agriculture

Currently the floodplains used by agriculture. The grasslands are used for livestock, with some parcels used for growing crops. Arable farms in the area mainly grow corn and are located in the east of the Bossenwaard. The grasslands are intensively managed (Hoofdrapport MER (Concept), 2011).

In the Bossenwaard parcels date from the Middle Ages. In the eastern part of Vianense Waard the allotment recalls the period of peat mining in the area, giving a positive contribution to cultural heritage (Hoofdrapport MER (Concept), 2011).

Nature

At this moment no Natura 2000 areas are located near the project area. However, the area is planned to be part of the EMS and nature is planned here by the Province with the exception of Mijnsheerenwaard. The southern bank of the Lek is also part of a governmental nature development project (Provincie Utrecht, 2009). Due to intensive agriculture the ecological quality of the floodplains is low. The ecological quality is influenced by spatial obstacles, like bridges, canals and towns. Up to the Hagestein barrier the river shows daily fluctuations due to tidal influence (Hoofdrapport MER (Concept), 2011).

Landscape

The landscape in the floodplains is characterised as an open landscape alternated with green accents. In Bossenwaard the former bifurcation point of the Kromme IJssel and the Lek River is located and the southern bank shows old courses of the Lek. The floodplains are surrounded by the cities of Vianen and Nieuwegein. In the south a summer dike is seen. The highways and WWTP are obstacles that have a large impact on the landscape. In 't Waalse Waard a former sand pit is located (Hoofdrapport MER (Concept), 2011).

Living

The Buitenstad area of Vianen is located within the Mijnsheerwaard, protected by a summer dike. Furthermore the Ponthoeve is located in the Pontwaard, a farm that is also used for some recreation. The surrounding cities are part of the Utrecht agglomeration, thus the floodplains are located in an urbanised area. Infrastructure in the project area is restricted to the two highways and a road to the ferry between Vianen and Nieuwegein. Other paths are used by agricultural traffic. The cityscapes of Vreeswijk and Vianen are monumental and must remain visible. Furthermore some relics are found, like remainders of a harbour near Vianen and brickworks (Hoofdrapport MER (Concept), 2011).

Recreation

Recreation is hardly developed in the project area. The floodplains are badly accessible, while the dike is used for extensive recreation. The city centre of Vianen attracts some tourists and in the Ponthoeve small scale recreation exists. Because of its location at a crossing of water ways some boating is noticeable. In surrounding areas some large recreational facilities are located, like campsites and marinas. The lake in 't Waalse Waard is also used for recreation (Hoofdrapport MER (Concept), 2011).

PKB

This project is part of a set of alternatives for the dike relocation at Lienden, which was heavily opposed in PKB 1. The regional advice for the PKB already included the floodplain excavation near Vianen due to its possibilities on improving spatial quality (Stuurgroepen Boven- en Benedenrivieren, 2005). Because of its status of alternative, no consultation took place in the PKB phase. In PKB 4 it was appointed that the floodplains in the project area will be excavated to reach a water level drop of 6 cm. Other ways to reach the hydraulic objective are lowering of the summer dikes and the dam near the barrier (PKB 4, Nota van Toelichting, 2007). The land use after the project should be nature combined with recreation. Other issues that came forth in PKB 4 are that historical values in the area must be preserved or made visible again. The Province of Utrecht approved to be the initiator of the planning phase in 2007.

SNIP 2

In this phase three alternatives are created to meet objectives, differing in the rate of spatial development. The governments proposed the alternative that concentrates most on spatial development. One of the aspects of this alternative is development of housing in the floodplains. During consultation much opposition was shown, mainly against the housing plans. Residents and nature organisations found support in the city council, which eventually voted against the plans for housing (Gemeente Nieuwegein, 2008). Other issues that were highlighted in the discussion are development of recreation near Buitenstad, the accessibility of the island near the barrier and seepage (Provincie Utrecht, 2008).

After this consultation a new alternative was created with the previous design as a base, but without plans for housing. In April 2009 the new design was consulted again and was received more positive. Next to the removal of housing plans the new design showed no development near the Nieuwegein marina. Issues that came up this time were the maintenance of the nature status of Bossenwaard, as well as the prevention of traffic and safety problems in this area. Residents from the Buitenstad area were still concerned about the increase in traffic due to recreation (Provincie Utrecht, 2009).

The new design was chosen as the SNIP 2a Design by the State Secretary at 8-7-2009. The water level drop was too high, which was done in order to prevent dike improvements near the project area. However, additional measures did not result in sufficient water level lowering that makes dike improvements obsolete (Hoofdrapport MER (Concept), 2011). The hydraulic objective was changed from 6 cm to 8 cm and a margin was included to compensate the increased roughness caused by nature development.

2.3.2. Comparison SNIP 2a & SNIP 3 Designs

Description SNIP 2a design

The SNIP 2a Design is shown in Figure 17. In the west of the Bossenwaard the area near the Kromme IJssel course is changed into reed lands and in the wake of the bridge a forest and parking lot is planned. This parking lot is needed to allow extensive recreation in the floodplain. Some lookouts are created to enjoy the landscape. Land use in the east of the Bossenwaard will be a mixture of recreational facilities, like small beaches, and nature. The planned channel remains close to the river and flows through the complete floodplain. An extension of the marina and a parking lot for visitors of the marina are included.

In Mijnsherenwaard and Pontwaard some developments are planned. Near the bridge parkland is seen, Mijnsherenwaard also shows several extensive and intensive recreational facilities like walking paths, small beaches and recreational facilities near Buitenstad. The latter consists of reconstruction of a mill, restoration of the former harbour in an old river course and a parking lot for campers. Near the centre of Vianen another parking lot is planned. A channel separates the Ponthoeve from the floodplain.

Vianense Waard will be changed into natural grasslands, in addition to some parkland near the dike. The summer dike is relocated and a channel is placed next to the river. In this floodplain several extensive recreation facilities are seen, like fishing spots and hiking paths. Near the barrier a bridge is planned for slow traffic.

In 't Waalse Waard a parking lot is created at the west of the floodplain and trees are planted west of the bridge. A channel is excavated towards the former sand pit. This sand pit remains its current shape. A lookout is created at the point where the Lekkanaal is connected with the river.

For the island near the barrier plans are created for intensive recreation. On the island a hotel, a restaurant, a museum and a camp site will be developed. At the northern point of the island a lookout is created. Technical measures near this location are the lowering of the dam and the summer dike of the Honswijkerwaarden.

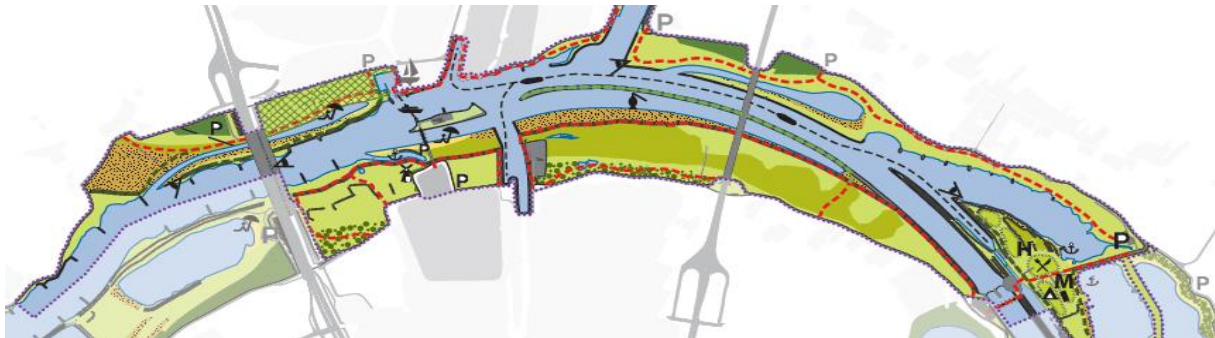


Figure 17: SNIP 2a Design 'Ruimte voor de Lek'

Description SNIP 3 design

The SNIP 3 Design of the RvdL-project is presented in Figure 18. Near the Kromme IJssel reeds are planned and the present ditch has been given a more natural layout. In the west of Bossenwaard forest is created in the wake of the bridge and the channel shows several side branches. In the west of the Bossenwaard extensive recreation is enhanced with several hiking paths. A bird viewing point is created on the edge of the side channel and forest. Furthermore a high water refuge point is made near the inlet. The east of Bossenwaard is dominated by side branches of the channel, which cross several hiking paths. A paved path is constructed for disabled people and an area is reserved as dog walking area. The latter is separated from nature by small wooden fences. The paved path ends at a lookout near a former brickyard. The marina is taken out of sight by placing trees.

In Mijnsherenwaard historical parcels are accentuated by vegetation along the boundaries and various hiking paths are created. Just north of the Buitenstad a camper parking lot, mill and marina are planned. The marina is constructed along an excavated channel that follows a former river course. A viewing point is created on the place where the Merwedekanaal is connected with the river. The fields south of the channel are protected by a summer dike and vegetation is used for accentuating parcels. In these fields a parking lot with vegetation is planned.

East of the WWTP forest is placed and parcels are accentuated by vegetation. The summer dike is relocated and behind it a ditch is excavated. Extensive recreation is created on the eastern quay at the connection of the Merwedekanaal and the river. Through the floodplain hiking and horse riding paths are planned. The horse riding path is separated from the hiking path. Near the bridge forests are developed.

The channel in 't Waalse Waard shows some side branches. Near the bridge forest is created and extended. A parking lot is planned near the entrance to the floodplain. At this entrance a wooden gate is placed. At the inlet of the channel a lookout is made. The dam near the barrier is also lowered.



Figure 18: SNIP 3 Design 'Ruimte voor de Lek'

Comparison

In the Bossenwaard some differences are noticed between SNIP 2a and SNIP 3. The channel has side branches and the Kromme IJssel course is more visible in SNIP 3. The parking lot is removed and a bird viewing point is included in the plans. In the east of Bossenwaard the mixture of recreation and nature has become more detailed. The beach and extension of the marina are taken out of the design and several extensive recreational facilities are included, like a dog walking area and more hiking paths.

The parcels in Mijnsherenwaard and Pontwaard are made visible with vegetation instead of creating park landscape. Vegetation is also placed at the parking lot that is planned in this floodplain. The location of the excavation has been changed to a former river course. A new lookout is created at the connection of the Merwedekanaal and the Lek River.

In the Vianense Waard the proposed channel is taken out of the plans, its hydraulic effect is compensated by the relocation of the summer dike. The park land at the toe of the dike is being replaced by small vegetation that accentuates the parcels. Vegetation is also planted at the WWTP and bridges. The fishing spot is moved to the Merwedekanaal and a horse riding path will be constructed.

In 't Waalse Waard the channel also shows more side branches and the shape of the sand pit is not visible anymore. Furthermore a cycling path is planned in this floodplain in the SNIP 3 Design. The plans for recreation facilities at the island, including the bridge near the barrier, are removed from the plans.

2.3.3. Characteristics of stakeholders

In this project several governmental organisations form the SG. These organisations are the Province of Utrecht, the municipalities of IJsselstein, Nieuwegein, Houten and Vianen, the water boards Rivierenland and Stichtse Rijnlanden, Rijkswaterstaat East-NL and PDR. These governmental organisations are grouped in supervising governments (water boards, RWS and PDR) and executive governments (province and municipalities). The SG also includes the chairman of the kbg. The representatives in the kbg are grouped in residents of Buitenstad and Nieuwegein, nature organisations of Vianen and Nieuwegein and recreation organisations. Residents from the city of Vianen were not seated in the kbg and are taken out of the analysis. All groups have various characteristics, which are analysed in this paragraph. In Appendix D.2 an overview of all characteristics is given.

Interests

An overview of the interests is presented in Appendix D.1 along with some background information. In this paragraph the SNIP 3 Design is discussed according the interest of stakeholders.

The supervising governments have the interest that the project complies with the objective within the stated boundaries. These boundaries consider mostly time and costs, while the objective focuses on hydraulic effect and a design that satisfies the needs for permits. In the SNIP 3 Design the lowering of the dam, the relocation of the summer dike and the various channels result in a water level drop.

Realisation of the EMS and recreational facilities are two important interests for the executive governments. The current grasslands will become more natural and forests are planted in areas where it does not affect flow. The channels will get muddy banks which will, together with the side branches, make the (tidal) dynamics of the river more visible. There will also be some reed land developed. Recreational facilities mostly focus on extensive recreation to experience the landscape of the floodplains. More intensive recreation facilities are the reconstructed mill, the marina and the camper parking lot near Buitenstad. The improvement of cityscapes is mostly translated in the design as making relics visible again. The planned mill and marina of Vianen were seen in the past, while the channel in the Pontwaard highlights an old river course. Also the vegetation surrounding historical parcels is part of cultural heritage in the design. The demand for no deterioration of seepage resulted in the relocation of the summer dike instead of a channel in the Vianense Waard.

Some clear aspects that show the influence of the nature organisations on both banks are that the obstacles for spatial quality (bridges, WWTP) are taken out of sight. On their demand the course of the Kromme IJssel is more visible and a distinction is seen in the Bossenwaard between nature in the west and a combination of nature and recreation in the east of this floodplain. The aspects of the EMS are also supported by the nature organisations.

The interests of the residents of Nieuwegein are mostly noticeable in the Bossenwaard. Here some recreational facilities are planned for experiencing the landscape in the floodplain, also for disabled. The dog walking area is also a result of their demands. The influence of residents of Buitenstad caused the vegetation at the planned parking lot near Buitenstad. The other interests of this group focused on the intensive recreation, which is still included in the design. The demand for no increase in seepage resulted in relocating the summer dike in the Vianense Waard and Pontwaard. This group also favours the decision to take obstacles for spatial quality, like the bridges, WWTP and marina, out of sight.

The influence of recreation organisations is seen in the SNIP 3 Design with their demands for development of infrastructure for extensive recreation and for the recreation facilities near Buitenstad. Specific features of extensive recreation are the hiking, horse riding and cycling paths, the lookouts and the fishing spot. Extensive recreation benefits from high spatial quality and therefore recreation organisations also favour the plans for taking obstacles out of sight. Accessibility is essential for recreation, thus entrances towards the floodplains are necessary for this group.

Power

Authority

In this project there are two groups that have authority, which are the supervising and executive governments. PDR is the only stakeholder with national authority because RftR is carried out across the Netherlands. The water boards and regional department of RWS have regional authority because they carry out their activities in a determined region.

The executive governments consist of the province and surrounding municipalities. The province has regional authority while the authority of the municipalities can be determined as local.

Financial means

Financing of the project is mainly done by PDR. Other financial contributors are the Province of Utrecht and the municipalities of Vianen and Nieuwegein. Furthermore subsidies for nature development are used (Adviesnota SNIP 3 Ruimte voor de Lek, 2011). In total there are seven contributors in financing the project, which can be distinguished in the supervising and executive governments. Because of the inclusion of PDR in the supervising governments this group finances most of the project.

Land tenure

The third characteristic of power is land tenure. In

Figure 19 an overview is given of land tenure for residents (light green), nature organisations (dark green), supervising governments (grey), recreation organisations (yellow), executive governments (blue) and private institutions (purple).



Figure 19: Land tenure RvdL June 2010 (adapted in Google Earth)

The supervising governments are land tenants of dikes and ditches because of the inclusion of the water boards. The land near the highway bridges is also owned by the supervising governments. Furthermore various lands are property of DLG. These lands are planned to be excavated for the channels or the relocated summer dike will be constructed here. The data dates from June 2010, so it is possible that lands are already purchased in anticipation of realisation of the project.

The executive governments are land tenant of infrastructure. Little infrastructure is located in the project area, so the executive governments hardly have any land. The road from Vianen to the ferry is property of the municipality of Vianen, the eastern quay of the Merwedekanaal is property of the province. The road to the ferry is intersected by a channel.

In the west of the Bossenwaard SBB is the land tenant of some lands in the west of Bossenwaard. These lands are planned for excavation, for reed lands near the Kromme IJssel and for forest. On the southern bank a small area near the WWTP is property of a provincial nature organisation. This land will also be turned into forest.

The residents of the area are, next to the supervising governments, the other major land tenant with property throughout the various floodplains. Their lands will be used for excavation, reed land, natural grasslands, forests and several recreational facilities.

The group of recreation organisations is land tenant of some areas in Mijnsheerwaard and Pontwaard because of the inclusion of a particular farmer that wants to develop recreation. Areas around the marina and in 't Waalse Waard are also property of recreation organisations. The lands of recreation organisation on the northern bank hardly face any change, on the southern bank the land of recreation organisations are used for excavation of a channel and for the parking lot near the city centre.

The last land tenants are private institutions. Within the project area the area around the sand is property of two mining companies. This lake will become part of the channel. A small strip in the Vianense Waard is owned by a private institution but it faces no change.

Specific knowledge

The supervising governments have project experience due to their involvement in all RftR projects. Because of their work they also have knowledge on water subjects. The stakeholders in this group also have experience on which permits are needed for realisation.

The executive governments are related to the project area and have more insight in local and regional demands. One of the main duties of these governments is spatial planning, which is useful in this project. Because of their work they also know which permits are needed.

The other stakeholders have much less expertise. These groups are unique due to their connection with the project area and are only involved in the RvdL project. Because of their local character they have insight in local demand and in the local situation. Nature and recreation organisations can contribute to the project because of their knowledge on nature and recreation aspects. This is useful because these subjects are appointed as proposed land use.

Conclusion

In the overall power position it can be seen that the supervising governments has the highest power position. This group is the largest financier, an important land tenant, has the highest authority and useful specific knowledge. The executive governments have a slightly lower power position. The executive governments have all power means, but their land tenure is so low that it hardly contributes to their power position.

The residents at both banks have a medium power position. This is caused by the large land tenure of these groups. They also have some specific knowledge on the local situation, which is useful for the project. The other aspects of power are not seen in these groups. The nature organisations of Nieuwegein also have a medium power position. They have some lands in west Bossenwaard and their specific knowledge on local nature is very useful because of the appointment of nature as a future land use.

The last argument also counts for nature organisations at Vianen. However, their power position is lower because they hardly have any property in the floodplains. The recreation sector has an equal power position of low-medium. This is composed of their little land tenure and their specific knowledge on recreation.

Table 7: Overview power position 'Ruimte voor de Lek'

Stakeholder	Power
1. Supervising Governments	High
2. Executive Governments	Medium-High
3. Nature organisations Nieuwegein	Medium
4. Nature organisations Vianen	Low-Medium
5. Residents Nieuwegein	Medium
6. Residents Buitenstad	Medium
7. Recreation sector	Low-Medium

Relations

The last characteristic of stakeholders is the relation with other stakeholders, which is investigated by a network diagram and by analysing its interactive role. Figure 20 shows the network diagram for RvdL.

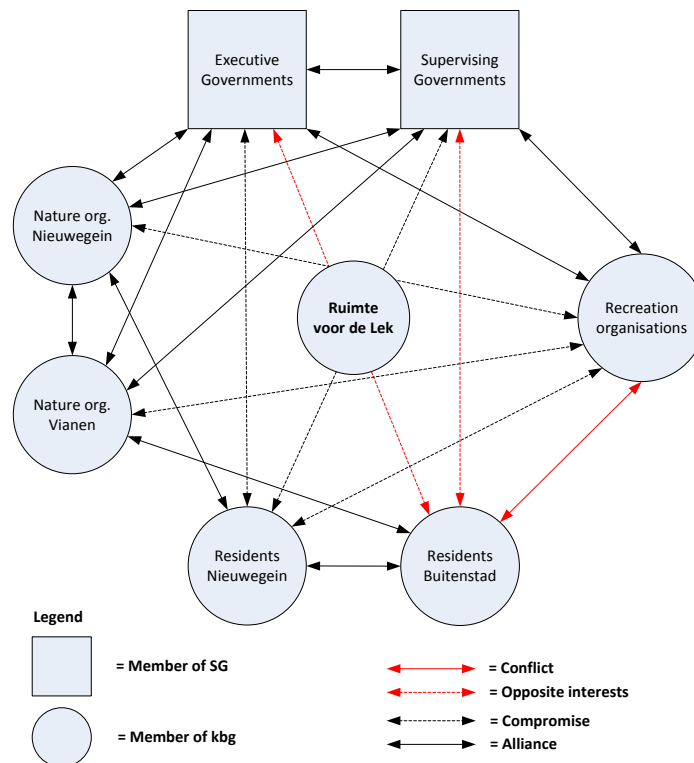


Figure 20: Network Diagram 'Ruimte voor de Lek'

This diagram points out that the supervising governments have good relations with all groups except the residents, due to the appointment of nature and recreation in the area. In the SNIP 3 phase a

compromise was reached with residents of Nieuwegein on these subjects. The residents of Buitenstad oppose intensive recreation, showing an opposite interest with the supervising governments. This also counts for the relation of the executive governments. Nature organisations have good relations with all involved groups. With the recreation organisations a compromise is seen on combining recreation and nature by extensive recreation. Between nature organisations much overlap exists, but these groups will concentrate on nature in the floodplain near their city.

Residents of Nieuwegein see a compromise by including extensive recreation. This results in a positive relation with governments and recreation organisations. The residents of Buitenstad on the other hand show a conflict with the recreation organisations because of the development of more intensive recreation. Governments support these plans and therefore a negative relation occurs between governments and the residents of Buitenstad. This negative relation also results from the idea of the executive governments to construct a parking lot near Buitenstad, which is opposed by nearby residents. Between the resident groups a good relation is seen, but both groups will focus on their own area.

As mentioned earlier the recreation organisations have a conflict with residents of Buitenstad due to the construction of intensive recreation. With other stakeholders the recreation organisations maintain positive relations, mostly by focusing on extensive recreation.

Next to a network diagram the participation ladder is used for analysing the interactive role of the stakeholders in the project. The SG consists of governmental organisations that cooperate. The initiator of RvdL is the Province of Utrecht, so the executive governments show two roles: the initiator and partner of the initiator. The supervising governments consist of only partners. The other groups are seated in the kbg, which advises the SG on the project. Therefore these groups have an advising role.

Table 8: Overview relations SNIP 3 'Ruimte voor de Lek'

Stakeholder	Alliance	Conflict	Role participant
1. Supervising Governments	2,3,4,7		Partner
2. Executive Governments	1,3,4,7		Initiator, Partner
3. Nature organisations Nieuwegein	1,2,4,5		Advisor
4. Nature organisations Vianen	1,2,3,6		Advisor
5. Residents Nieuwegein	3,6		Advisor
6. Residents Buitenstad	4,5	7	Advisor
7. Recreation Organisations	1,2	6	Advisor

Conclusions

To draw conclusions a Power-Interest Diagram (PID) is made for the SNIP 3 phase of the RvdL-project. This diagram can be presented in Figure 21. An overview of all characteristics is given in Appendix D.2.

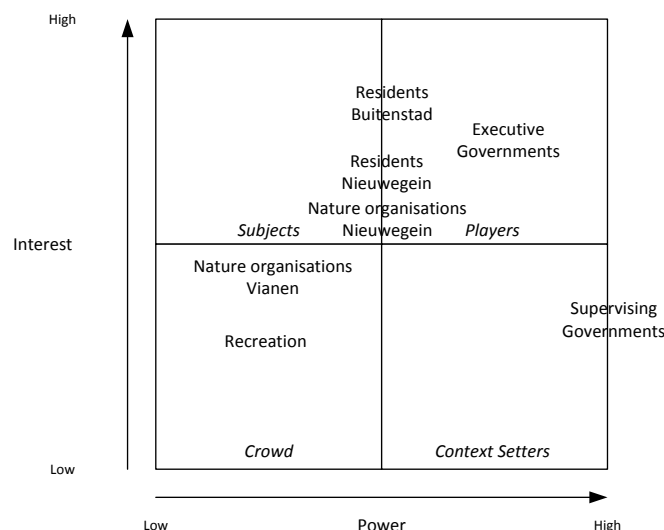


Figure 21: Power-Interest Diagram 'Ruimte voor de Lek'

The supervising governments are mostly interested in realisation of the project according to the objectives stated in the PKB. Therefore their interest is assigned as low-medium. The executive governments see the opportunity to develop EMS and recreation in an urbanised region and are more

interested in spatial aspects of the project. Residents also have high interest because the project affects their living and working environment. Nature and recreation organisations are interested in certain parts of the project. The interest of nature organisations in Vianen is lower than nature organisations in Nieuwegein because developments in the Vianense Waard include little nature.

The PID shows that the RvdL-project has one player, the executive governments and the supervising governments as a context setter. These groups have the highest power positions and are partners in the SG. This shows that the members of the SG can use their power position to see their demands granted in the design. These two stakeholder groups have good relations with nature and recreation organisations. Two of the nature and recreation groups are located in the crowd and benefit from their relation with the governments. The other nature group has higher interest and power and also profits from its relation with the governmental groups. The PID also shows that two groups with high interest, the residents, do not have a good relation. The residents of Nieuwegein have reached a compromise with the governments and recreation, but the residents of Buitenstad still oppose the plans for intensive recreation near Buitenstad. However, the residents have less power and no good relations with powerful stakeholders, making it unlikely that the plans for intensive recreation will be removed from the plans.

2.3.4. Conclusion

Independent variables

In the PKB is stated that the proposed land use for the RvdL-project is nature in combination with recreation. The hydraulic objective must be reached by excavating the floodplains and is initiated by the Province of Utrecht.

Land use

Appointing nature and recreation as proposed land use favoured the interests of nature and recreation organisations and plans of the executive governments for development of the EMS and recreation around cities. The power position of nature and recreation organisations increases because their specific knowledge is of more use. The province has access to several subsidies for nature development, which are used for financing. Due to this the power position of executive governments also benefits from the appointment for nature. This variable also resulted in good relations between governments, nature and recreation organisations because of overlap in interests. The development of recreation near Buitenstad is more intensive and causes opposition among residents of this area. Thus developing intensive recreation worsens the relation between residents and the initiator and recreation organisations.

The choice for recreation is visible in the design as facilities for extensive recreation. Near Buitenstad some intensive recreational facilities are planned, which are a parking lot for visitors of Vianen, a marina, a parking lot for campers and reconstruction of a mill. Nature aspects are the excavated side channels to make tidal dynamics of the river visible and the production grasslands which are turned into natural grasslands. Creating forest and reed land are also related with nature. Natural relics are brought back in the landscape by excavating former river courses or accentuating historical allotment.

Some differences between SNIP 2a and SNIP 3 can be contributed to this variable. The side branches of the channel enhance development of specific vegetation along the channel and vegetation to accentuate historical parcels also improves spatial quality of the landscape, just as the relocation of the channel in Pontwaard and the change in shape of the sand pit in 't Waalse Waard.

Measure

Choosing floodplain excavation influences land tenure because excavation ranges in efficiency and some lands become more important than others. Most areas that will be excavated in this project are currently property of residents, increasing their power. By selecting floodplain excavation opportunities come along, like creating wet nature or developing marine recreation, which on their turn influence interests of stakeholders. These interests on their turn influence the relation among stakeholders, so the measure affects all characteristics of stakeholders. However, the location of the channels is subordinate to various boundaries, which is best seen in the Vianense Waard. A planned excavation here was translated into a relocation of the summer dike because a channel would result in more seepage.

The design is largely set by this variable. Choosing floodplain excavation results in the various channels. Along with these channels specific vegetation can be planned, as well as the marina of Vianen.

Excavation also gives the opportunity to make old river courses viewable again. Due to the opportunities for nature development floodplain excavation enhances the possibilities of extensive recreation.

The side branches that come up in SNIP 3 are possible because of the choice for this type of measure. Other differences do not result from the choice for excavation.

Initiator

The last independent variable is the type of initiator, in this project a public institution. A SNIP-procedure is carried out for realising the project. The initiator composed a SG and kbg, so stakeholders maintain relationships with all other groups. The initiator is seated in the SG together with the supervising governments and other executive governments. Due to this the interactive role is also influenced by choosing a public initiator. This shows that the initiator can influence relations between groups.

The design shows similarities with interests of the initiator. The development of nature and recreational facilities are two important interests of the province and are enhanced in other provincial programmes (EMS & recreation around cities). Creating several types of vegetation and using tidal dynamics are two influences of the EMS. Infrastructure for extensive recreation and some intensive recreation are included in the design to fulfil the demand for recreation. The remark has to be made that interests of the province are largely in line with the proposed land use. The partners of the initiator also see their interests granted. In the SNIP 3 Design this is seen by the intensive recreation facilities near Buitenstad, the relocation of the summer dike and the lowering of the dam near the barrier.

Changes in the SNIP 3 phase favour interests of the initiator by developing specific types of nature and recreation. Also accentuating aspects of cultural heritage are favoured by the initiator. The relocation of the summer dike instead of channel excavation is a change initiated by a partner of the initiator. This shows that many changes favour the interests of the initiator, but are also favoured by other stakeholder groups. Differences in nature are supported by all stakeholders, just like extensive recreation, so much overlap exists between interests of stakeholders.

Contextual factors

Previous phases

This project was included in the PKB as an alternative for dike relocation at Lienden. Therefore in the PKB no consultation took place. In the SNIP 2a phase no consultations took place up to consultation of the design. Thus it can be concluded that consultation took place late in the project, resulting in a stressed relation between executive governments and local stakeholders. This was caused by plans for housing in the Bossenwaard and intensive recreation near Buitenstad. In the SNIP 3 phase more attention was paid to support of the plans, leading to a better relation between executive governments and local stakeholders of Nieuwegein. In the design this was seen by a layout of Bossenwaard as demanded by nature organisations and residents of Nieuwegein. At Vianen the plans for intensive recreation stressed the relation between residents of Buitenstad and the executive governments. The SNIP 3 phase shows no differences on the subject of intensive recreation. Changes on the southern bank mostly favour the demand of executive governments to enhance cultural heritage.

The influence of previous phases on the design is limited to changes in Bossenwaard. This is also the location where most opposition occurred in earlier phases. The other point that caused opposition in earlier phases, intensive recreation near Buitenstad, is still included in the plans.

Location

The project area is located in an urban context, increasing the demand for nature and recreation. Looking at characteristics of stakeholders this influenced interests and power of stakeholders. The specific knowledge on nature and recreation is more useful and thus results in higher power. The demand for recreation is visible in the design as extensive recreation and near Buitenstad more intensive. Nature is developed through the whole project area. These demands are already encouraged in the design by the proposed land use after realisation.

2.4. HUISSENSCHEN WAARDEN

The fourth project is a floodplain excavation near the village of Huissen. The floodplain is situated in the Arnhem-Nijmegen urbanisation on the western bank of the Pannerden Canal, in the province of Gelderland. The project area is bounded by the Pannerden Canal in the east and in the north by a bridge that forms a connection between the highways A325 and A12. To the west and south the winter dike forms the boundary. The bifurcation of the Nederrijn and IJssel is located near the area, while 5 kilometres upstream the Rhine bifurcates into the Waal and Pannerden Canal. These bifurcations are important for the Dutch water system and have a fixed distribution. Two industrial areas are seen, Looveer and Scherpekamp, where heavy industry is located. The floodplain is also part of the Natura 2000 area of Gelderse Poort, a nature area protected by European Law. In 2005 a letter of intent was signed between the initiator and the municipality. The project was included in the PKB as an alternative for lowering of the groynes in the Pannerden Canal and is carried out by a private party, making the excavation of the Huissensche Waarden the only project within RfTR that is not realised by a governmental organisation.

The objective of the project as stated by the initiator is an economically feasible, self-sufficient strategy in which river widening, nature development and spatial quality are realised with sand mining as economic driver (Stichting Huissensche Waarden, 2008). The hydraulic objective to reach a water level drop of 8 cm between river kilometres 870.5 and 871.5 (PKB 4: Vastgesteld Besluit, 2006). The preferred land use after the measure is nature, while the project also focuses on spatial quality by enhancing cultural heritage, a better fit in the landscape for the industrial areas and by developing recreation (Stichting Huissensche Waarden, 2008).



Figure 22: Overview project area Huissensche Waarden (edited from Google Earth)

2.4.1. Description Initial Situation

Agriculture

Most lands in the area are currently used for agriculture. Agriculture in this area consists mainly of recultivated grasslands that are used for roughage like hay. The quality of the soils shows much variation. Next to the grasslands some fields are used for growing crops, mainly corn. The northern and southern parts of the floodplain are used by dairy farms that are located outside the project area, in the middle of the floodplain the land is used by a farmer located at Looveer. This farmer also has a mink breeding farm. Currently some farms apply agricultural nature management (Stichting Huissensche Waarden, 2008).

Nature

The ecological value of the Huissensche Waarden is low compared to surrounding floodplains (Stichting Huissensche Waarden, 2008). About 218 ha of natural ecotopes are present, of which extensive maintained grassland and brushwood are most common. Due to agriculture the quality of flora is relatively low, except for the Angerensche Strang and the kolks. The floodplains are used for foraging by birds, which forms an important part of the conservation objective of Natura 2000. These birds demand an open landscape with production grassland (van Mil, 2011). Plans exist to develop nature according to the EMS. Due to the Natura 2000 conservation objective the development plans for the EMS cannot be realised (Stichting Huissensche Waarden, 2008). The EMS focuses on developing nature in the north between the current summer dike and the river. Other parts of the floodplain are planned to be an interweaving of nature and agriculture (Provincie Gelderland, 2009). Earlier versions of the EMS aimed to develop nature in the floodplain, except for areas in the north and south where interweaving was planned (Provincie Gelderland, 2005).

Landscape

The landscape of the Huissensche Waarden can be characterised as an open landscape with lower lying areas in the centre of the floodplain. This open landscape is interrupted by the industrial areas and some small scale nature near the kolks and Zwanewater. In the southern part clay pits and vegetation is noticeable. Furthermore some relics of river courses are visible, but due to agriculture and sand mining most of these relics have disappeared. In the north the former river course is noticeable in height differences, while the Huissensche and Angerensche Strang are relics that are still visible. Other aspects of cultural heritage in the area are the kolks, results of previous dike breaches and a meander in the south (Stichting Huissensche Waarden, 2008).

Living

The town of Huissen is located in the urban area between the cities of Arnhem and Nijmegen. In the project area some people live at the Looweer area and one family at the Brouwketel. The Looweer industries form an important source of employment in the area, but also cause nuisance due to dust and noise (De Gelderlander, 2011). Infrastructure in the floodplain is concentrated on the industrial areas and some unpaved paths are used for agricultural purposes. In the Huissensche Waarden some relics of residential areas and paths can be found (Stichting Huissensche Waarden, 2008).

Recreation

At this moment some extensive recreation is seen in the floodplain, which concentrates on the dike and the kolks. The dike is used for cycling and the kolks by anglers. The Zwanewater is used for some swimming and surfing. On an annual base some 1500 recreational ships sail past the area (Stichting Huissensche Waarden, 2008).

PKB

The plans for desanding the Huissensche Waarden date from 2000 when the initiator of the project proposed to redesign the area (Stichting Huissensche Waarden, 2008). During composition of the PKB the project was considered as promising because it was already in an advanced stage and for its opportunities for nature development and improving recreational facilities. Furthermore the perspective on costs was appealing (Stuurgroepen Boven- en Benedenrivieren, 2005). During consultation of the PKB some comments were made on the plans. Consultations focused on opportunities for recreation and realisation of the project by a private party. The agricultural sector prefers the alternative of lowering groynes because that does not affect agriculture (PKB deel 2; inspraak en adviezen, 2005). Within the project consultations had already taken place on the Starting Note of the EIA, which was published in 2004.

In PKB 4 the decision was made to include the floodplain excavation, because of its opportunity to improve spatial quality of the area. Another reason is that for the long term an excavation is inevitable (PKB 4, Nota van Toelichting, 2007). Furthermore the project is financially self-sufficient (van Mil, 2011). Lowering the groynes in the Pannerden Canal was included in the PKB as a fallback-alternative. In 2005 an intention agreement was signed between the initiator and Lingewaard municipality.

Consultation of the Starting Note EIA pointed out a demand for nature development and the fear that the project only focuses on finances. The amount of the desanding volume is also opposed. Recreation

organisations and the local association for cultural heritage see opportunities (Stichting Huissensche Waarden, 2004).

SNIP 2a

Because the project is carried out by a private party makes no use of the SNIP-procedure (van Mil, 2011). Instead, the project carries out an EIA-procedure which is required by law. Appendix A shows that the Preferred Alternative of the EIA equals the SNIP 2a Design.

In the EIA, which was published in 2008, three alternatives were proposed. These alternatives focus on agriculture, spatial development and cultural heritage & nature development. The base of all alternatives is nature development, the hydraulic objective and a self-sufficient exploitation. Ranges of the desanding volume in the alternatives are between 20 and 30 million m³. The exact amount of sand mining depends on the permitted depth, how is dealt with non-marketable soil and the possibility to sell sands (Stichting Huissensche Waarden, 2008). The SNIP 2a Design is a combination of the various alternatives.

The first proposed plans showed a larger sand pit than in the approved EIA. Main argument was that the planned desanding lake would hamper nature development. A study pointed out that the desanding volume must be that large to be financially self-sufficient (De Gelderlander, 2008).

Various other points of interest were seen during composing the SNIP 2a Design. Discussions focused mainly on the influence on the bifurcation point and nature development. Also the desanding volume was still debated. A small volume is demanded for perspectives considering cultural heritage and agriculture, but for economic, hydraulic and recreational reasons a larger lake is planned. Local stakeholders demand an open floodplain in which farmers can maintain nature. The municipality has indicated that it favours a marina in the area, while the province has indicated that it supports development of extensive recreation (Stichting Huissensche Waarden, 2008).

In December 2008 the EIA was accepted by the province of Gelderland, ending the SNIP 2a phase (Provincie Gelderland, 2008). This approval started the SNIP 3 phase, which ended in September 2010 by the approval of the plans and the accompanying design by the town council (De Gelderlander, 2010).

2.4.2. Comparison of design

Description SNIP 2a design

The SNIP 2a Design is a combination of the various alternatives that are analysed in the EIA.

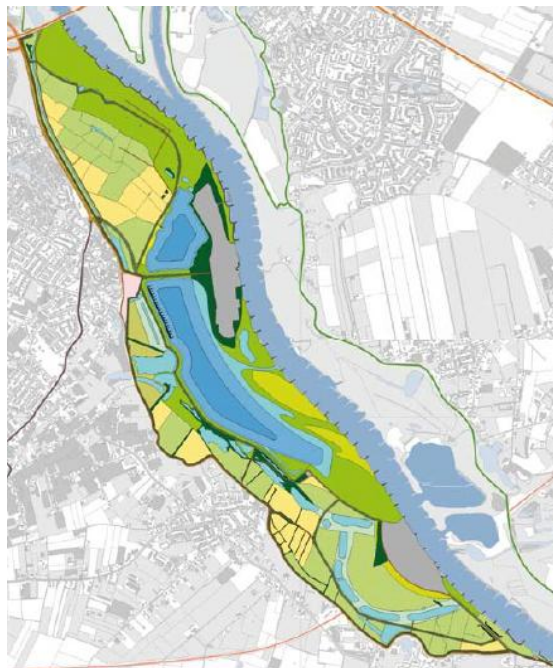


Figure 23: SNIP 2a Design Huissensche Waarden

The hydraulic objective is reached by constructing an inlet south of the Scherpekamp, relocating the summer dike and by reducing hydraulic roughness by creating long open water. The summer dike just

north of Looveer will be relocated and lowered to enhance outflow capacity, while the summer between the industrial areas is situated between the kolks and the resulting desanding lake. Accessibility of Looveer is guaranteed by raising the road (Stichting Huissensche Waarden, 2008).

In the north lands around the summer dike become nature areas. Between the summer and winter dike lands remain agricultural, but natural values will be developed by maintaining the areas according agricultural nature management. The summer dike will be relocated behind the Zwanewater and a new summer dike will be created near the centre of Huissen. West of the Zwanewater a small beach is planned, while the Looveer area is taken out of sight by planting trees around it.

In the middle of the Huissensche Waarden the excavation is carried out. The resulting lake has a small connection with the river and near the centre of Huissen a marina is planned. Furthermore it does not affect the kolks. The eastern banks of the lake have a gentle slope. The summer dike between the industrial areas is removed and constructed between the land and the kolks. Between the industries natural processes that can become active again. Near the centre of Huissen room is reserved for development of a new riverfront. The kolks are made more accessible and nature is enhanced in the area surrounding the excavation. The small scale landscape in the area between the winter and summer dike is made more visible with vegetation. Some agriculture remains in this part, but also in here agricultural nature management is enhanced.

The southern area shows an inlet and various small lakes that make an old meander visible. The area above the railway tunnel is not excavated. The meander is connected with a small lake that makes the former river course of the Angerensche Strang more visible. Vegetation is located at the Scherpekamp and the remaining agricultural lands are maintained according to the agricultural nature principal.

SNIP 3 Design

The design in Figure 24 was approved by the town council in September 2010 and can be considered as the SNIP 3 Design. This Design forms the starting point for the requests of the needed permits.

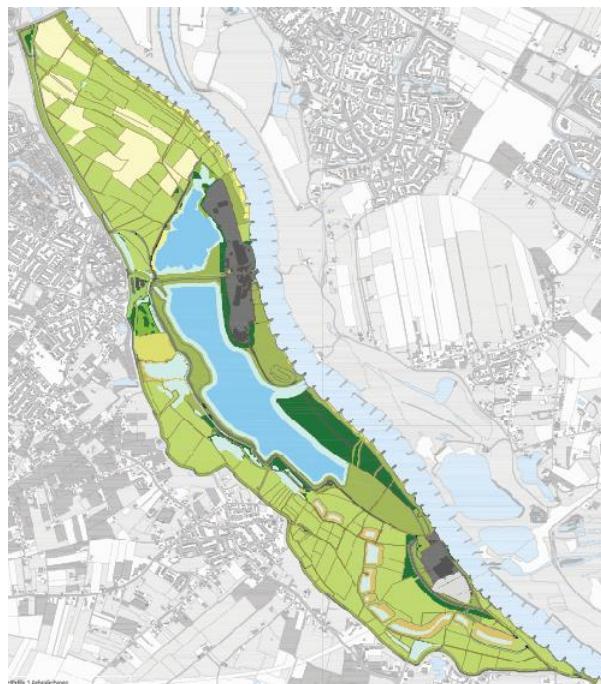


Figure 24: SNIP 3 design Huissensche Waarden

The hydraulic objective of 8 cm is reached by lowering and relocating the summer dikes and by creating an inlet in the south. These measures combined with the lower hydraulic roughness of the lake results in the demanded water level drop (van Mil, 2011).

In the north production grasslands and fields are seen, just like in the current situation. West of the Zwanewater and near the centre of Huissen two summer dikes will be constructed. On the western part of the Zwanewater a small beach is planned. Small areas along the Zwanewater and the winter dike are

planned for agricultural nature management, just like a small area between Looveer and the river. Along the Looveer area vegetations are planned, with wider strokes between Huissen and the industries.

The excavation takes place in the middle of the floodplain. In the northwest of the resulting lake an extension is seen, along some infrastructural facilities to allow the construction of a marina in this zone. All banks of the lake have a gentle slope. To allow boating, the lake has an open connection with the river. The area between the new summer dike and river will be managed as agricultural nature area. Around the kolks some vegetation is placed, as well as unpaved paths for hiking. Behind the summer dike a ditch is seen up to the Angerensche Strang. At the riverside new forest is created, to allow hiking along the river some openings are through the forest.

The area near Scherpekamp faces few changes compared to the current situation. Firstly the old meander is made visible again in the landscape by excavating various small areas. Along these water bodies swampy soils are planned. Also a part of the river course of the Angerensche Strang is made visible. The Scherpekamp area is less visible in the landscape by placing vegetation along the area. The grasslands maintain production grasslands.

Comparison

Comparing the designs shows that the fields between the new summer dike and winter dike will mainly keep its current land use in the SNIP 3 Design. This in contrast to the SNIP 2a Design where all lands were changed into natural managed agricultural lands.

The excavation shows some small differences between SNIP 2a and SNIP 3. In SNIP 3 there are gentle slopes along the complete lake instead of only on the eastern bank. Furthermore a small extension is seen in SNIP 3 at the place of the marina. Some differences in the contours of the lake are noticeable near the Angerensche Strang and the distance between the kolks and the lake has increased in SNIP 3. The last difference of the lake is that the connection with the river has changed shape.

The Vegetation patterns show two differences. The first is development of forest between the industrial areas in the SNIP 3 Design instead of triggering natural processes in SNIP 2a. Vegetation along the industrial areas also has changed. In SNIP 2a the Scherpekamp area was partly taken out of sight, in SNIP 3 vegetation is placed along the complete western part of the industrial area. Vegetation along the Looveer area has become smaller in the SNIP 3 Design, especially on the river side. However, still vegetation is located along the complete Looveer area.

Another difference between both designs is the distinction between the former meander and the former part of the Angerensche Strang in the south. In SNIP 3 these two parts are not connected to each other, while in SNIP 2a they were. In SNIP 3 the meander exists of smaller water bodies.

2.4.3. Characteristics stakeholders

In this project various stakeholders are active. The initiator did not establish a klankbordgroep (kbg), but approached the stakeholders individually (van Mil, 2011). All approached stakeholders had submitted an opinion during consultation of the Starting Note EIA. The involved governments are the Ministry of Agriculture, Nature and Food Quality (ANF), water board Rivierenland, the province of Gelderland, the municipality of Lingewaard and PDR. The Ministry is involved because the focus of the project on nature development (van Mil, 2011). The water board, PDR and the Ministry together form the supervising governments, while the province and the municipality together form the executive governments.

Involved non-governmental stakeholders are residents, farmers, nature organisations and recreation organisations (Stichting Huissensche Waarden, 2004). The historical association of Huissen focuses mainly on cultural heritage in the landscape and is therefore included in the group of nature organisations. Residents in the area are living at the Looveer area and in the Brouwketel. Adding the initiator to the stakeholders leads to 7 groups of active stakeholders in the project.

Interests

The first characteristic of these groups is formed by their interests. The supervising governments demand a project that complies with the objectives mentioned in the PKB. The hydraulic objective of a water level drop of 8 cm is leading, while the conservation of the Natura 2000 area is important too. The hydraulic objective is reached by creating an inlet in the south and by relocating summer dikes. Also the

desanding lake decreases the water level. The conservation aspect of Natura 2000 affects the design by demanding a large area of production grasslands.

Executive governments focus on realising the EMS and on improving recreational facilities. Realisation of the EMS is hampered because the area is located in a Natura 2000 area, thus the current natural values must be preserved. However, within Natura 2000 some adaptations can be made that enhance the settlement of specific species. By compensating nature loss with nature that forms the environment of these species a compromise is seen between Natura 2000 and EMS. New nature is developed between the river and the relocated summer dike. The grasslands with agricultural nature management, the planned forest and the gentle slopes of the excavation lake are aspects that develop new nature for EMS within the boundaries set by Natura 2000. Currently the industries have a negative impact on the landscape, so by taken them out of sight by vegetation increases spatial quality. Accessibility of the industries must be maintained because of their value for local employment and economy. This is guaranteed by increasing the height of the road. Facilitating recreation in the area is encouraged by this group. This is incorporated in the design with a marina, a beach at the Zwanewater and several cycling and hiking paths. The lake is connected with the river to allow boats to enter the marina.

Nature organisations oppose the plans for desanding and want to conserve the landscape according Natura 2000. By including much of the production grasslands in the area the landscape is conserved as much as possible, as well as its natural values. In the current landscape several areas with a value for cultural heritage are visible. The nature organisations demand that these areas are conserved or, if possible, are made visible in the landscape. The first is done by creating space between the kolks and the lake, while the latter is seen by reconstructing the former river courses in the south. Another aspect of cultural heritage is the small scale landscape at the toe of the dike. This is accentuated by small vegetation and hiking paths. To make people aware of the cultural heritage and nature in the area small facilities are planned, like a bird viewing hut and information panels.

At the Looweer area some residents are living. This group opposes the excavation because it directly affects their living environment. Instead of an open landscape with grasslands they will face a large and deep lake in the area. This interest could not be granted because the excavation is essential in the project. Other demands of the living environment are accessibility and seepage. Accessibility is guaranteed by heightening the road. Seepage also plays a role near Huissen, where seepage is decreased by creating a dike between Zwanewater and the town centre.

The largest land users in the current situation are the farmers. The desanding affects their working environment, so they demand conservation of agricultural land as much as possible. By maintaining the current land use between the summer dike and the winter dike this demand is largely granted. In the areas that will be subject to the dynamics of the river the farmers demand agricultural nature management. With exception of the area planned for forests, this demand can be seen in the design.

Recreation organisations see the opportunity to increase recreation in the area. They focus on both intensive as extensive recreation. Intensive recreation is noticeable by the planned marina and the beach at Zwanewater. Extensive recreation is seen by various hiking and cycling paths throughout the floodplain.

The last stakeholder is the initiator of the project. The initiator wants to excavate the floodplain for economic reasons and wants to combine this with nature development. For realising the project it has to comply with the objectives stated by the supervising governments and deliver a design that meets the requirements for the various permits. Another requisite for realisation is that enough sand is excavated to make the project economically feasible, which is related to the amount of volume that is excavated.

Power

Authority

In total 7 groups of stakeholders are involved in this project, of which two consist of governmental organisations and can have authority. The supervising governments include the Ministry of ANF, the water board of Rivierenland and PDR. PDR is part of Rijkswaterstaat and has national authority on the Rftr-programme. The Ministry is a national government and the water board is regionally organised. Thus the authority level of the supervising governments ranges from national to regional.

The executive governments are formed by the Province of Gelderland and the municipality of Lingewaard. The province is the second order of authority in the Netherlands, while the municipality is the third order. The authority of this group is regional-local.

Finances

The initiator finances all aspects of the project. This includes plans for nature development and recreation facilities. Also the management plan after realisation is composed and paid for by the initiator (van Mil, 2011).

Land tenure

In the project area two important land tenants are distinguished. The initiator has several lands, including Zwanewater and many lands that will be excavated. Also near the reconstructed meander the initiator is the largest land tenant. The other large land tenant is the group of the farmers, with much property in the north of the floodplain and various lands in the south.

Some of the other stakeholder groups are smaller land tenants. The supervising governments are the tenant of the water ways and of the winter dike. Furthermore there are some lands owned by DLG, which is a governmental institution. The executive governments are the land tenant of several kolks and the roads in the area. One kolk is property of the angling club, which is part of the recreation organisation.

Next to the active stakeholders there are also several particular institutions land tenants in the area. One of them is owner of some lands that are excavated. With this land tenant agreements are made about the revenues of the land (van Mil, 2011).

Specific knowledge

The involved stakeholders all have their own expertises, which are related to the main activities. The supervising governments have knowledge on the permits needed for realisation and have experience on river widening projects. Due to the inclusion of the Ministry of ANF knowledge was gained on agriculture and nature. Another subject in which this group is specialised is water due to the water board.

The executive governments deal with spatial planning and are therefore also experienced in the type of permits needed for realisation. Furthermore they have more insight in the local and regional demands because they are more bound to the project area.

The involved nature organisations, residents, farmers and recreation organisations are all bounded by the area and therefore all have local knowledge. These groups also have specific knowledge on their main activities, which are nature, recreation and agriculture. Residents have no other specific knowledge.

The last involved stakeholder group is the initiator. This consortium has carried out more desanding projects and thus has gained some experience on these projects. Because of their mining activities they have insight in the market and which soils are marketable.

Conclusion

Combining power resources results in an overall power position. The groups with the highest power positions are the two government groups and the initiator. The governments have authority, some parcels are property of these groups and their expertise is useful for realisation. Both governments are not involved in financing the project. The initiator has no authority, but finances all aspects of the project and is an important land tenant. Furthermore it has the expertise for carrying out the project.

The farmers are land tenant of much grassland in the north and south. This is their only power resource, resulting in a medium power position. Stakeholders with a lower power position are nature and recreation organisations. These groups are small land tenants, but their expertise is useful for realisation of the project. The residents have a low power position, because they lack power resources.

Table 9: Overview power position Huissensche Waarden

Stakeholder	Power
1. Supervising Governments	Medium-High
2. Executive Governments	Medium-High
3. Nature organisations	Low-Medium
4. Residents	Low
5. Farmers	Medium
6. Recreation organisations	Low-Medium
7. Initiator	Medium-High

Relations

In Figure 25 a relation scheme is presented of the Huissensche Waarden project. This Figure shows that the initiator is the only stakeholder with relations with all stakeholders. The initiator has good relations with the governments and recreation organisations. This is mainly caused by the fact that the plans focuses on development of natural values and recreational facilities. These aspects are also financed by the initiator and thus the governments and recreation organisations see their demands granted without financing them.

Another alliance consists of farmers, residents and nature organisations. These groups all oppose the volume of the desanding. As a response to the plans they have proposed an alternative early in the SNIP 3 phase. This alternative focuses on nature development and maintaining agriculture with fewer investments. Because of the last the desanding volume can be decreased. However, the proposed alternative was not realistic because it did not comply with nature and economic targets (van Mil, 2011). The alternative was initiated by nature organisations, which opposes desanding because its impact on nature. The farmers and residents oppose the volume of desanding, but less active.

In this project no kbg was established, but the initiator involved stakeholders individually after participation during the Starting Note (van Mil, 2011). Because of this the involved stakeholders have no relations with stakeholders outside their alliance.

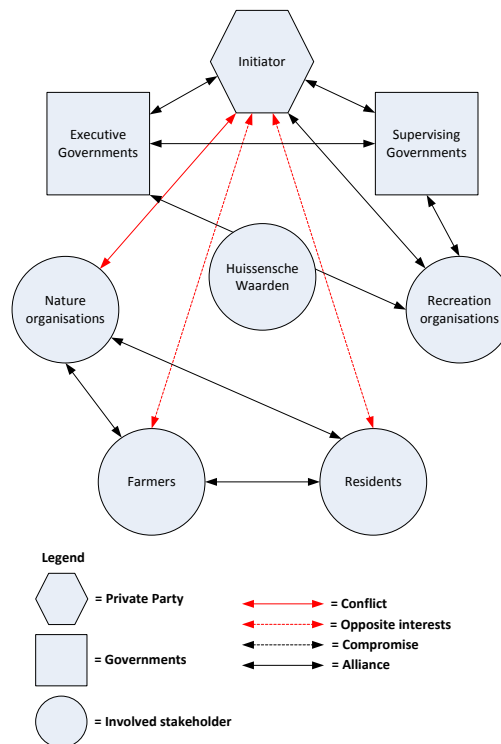


Figure 25: Relation scheme Huissensche Waarden

In this project two different interactive roles can be distinguished. The first role is in the group of the initiator. By definition this group has the role of initiator. The other stakeholders have an advising role, so they are asked for advice on open-ended questions (de Graaf, 2005). Cause of this is that in the project no Steering Group or klankbordgroep are established, but stakeholders are approached individually.

Table 10: Overview relations SNIP 3 Huissensche Waarden

Stakeholder	Alliance	Conflict	Role participant
1. Supervising Governments	2,6,7		Advisor
2. Executive Governments	1,6,7		Advisor
3. Nature organisations	4,5	7	Advisor
4. Residents	3,5		Advisor
5. Farmers	3,4		Advisor
6. Recreation organisations	1,2,7	7	Advisor
7. Initiator	1,2,6	3	Initiator

Conclusions

A Power-Interest Diagram gives insight in the relation between interests and power. The PID for the Huissensche Waarden is given in Figure 26. This diagram shows two important players in the project, the initiator and the executive governments. The initiator already invested in the area and wants to realise a project that results in sufficient profits. The executive governments see the project as an opportunity for realising parts of their policies on nature and recreation. This leads to a high interest.

The residents, nature organisations and farmers are groups with lower power positions but a comparable interest in the project with the initiator and executive governments. The interests of these groups are directly linked to the amount of desanding volume. The desanding volume affects the working environment of farmers and the living environment of the residents. It also affects Natura 2000 area of the Gelderse Poort and thus the core of existence of nature organisations.

The supervising governments wants the project to achieve the objectives according the PKB, how is less important. The recreation organisations are interested in the opportunities for recreation for the region, where the recreation will be developed in the region is less important.

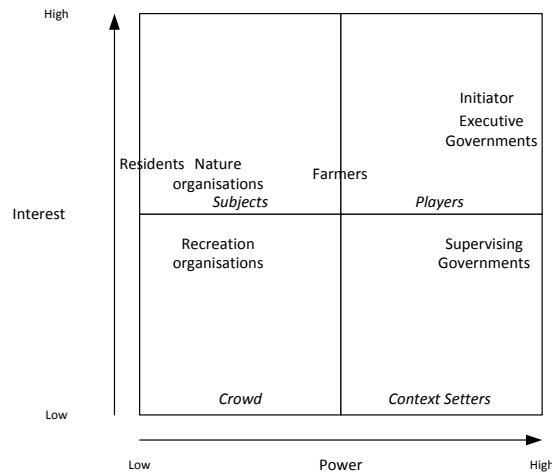


Figure 26: Power-Interest Diagram Huissensche Waarden

Combining the PID with the relations it becomes clear that the alliance between the initiator, recreation organisations and governments includes the most powerful stakeholders. This alliance is bound together by the fact that plans of governments are realised and financed by the initiator. Recreation organisations in the area benefit from the demand for more recreational facilities and are included in the powerful alliance, despite their low power. The other alliance concentrates in the left side of the PID, indicating that this alliance consists of groups with low power. The outlier of this alliance is formed by the farmers, which have medium power due to their land tenure.

Main aspect for the Huissensche Waarden project is the desanding area, favoured by the powerful alliance and opposed by the other alliance. Desanding will be carried out, but interests of the less powerful alliance are also taken into account. It can be concluded that the powerful alliance has used its power for realisation of the project, but also has taken interests of the less powerful into account in the parts that are not directly affected by the desanding area.

2.4.4. Conclusion

Independent variables

The proposed land use of the project is nature. Other independent variables mentioned in the PKB are that the measure must be a floodplain excavation that is carried out by a private party.

Land use

The choice for nature resulted in a higher power position of nature organisations. Their specific knowledge on nature was more useful after appointing nature and offered the opportunity to see their demands granted. Furthermore it favoured the interest of executive governments to develop the EMS. Nature is mainly developed between the river and the relocated summer dike. Near the old river course in

the south some nature development is planned. Other areas remain agricultural, so the influence of the proposed land use in this project is limited. In the SNIP 3 phase contours of the desanding area are adapted to preserve current natural values for nature development.

Measure

The second independent variable is that the hydraulic objective is reached by excavating the floodplain. The desanding project was proposed by the initiator and included in the PKB while it was already in an advanced stage. The initiator benefits most from floodplain excavation. Another effect of floodplain excavation is that it determines which lands become important and thus indirectly the power position of stakeholders. The interests of stakeholders are adapted by the choice for this measure. The design shows a desanding in the centre of the floodplain, a direct result of the choice for floodplain excavation. The old river course in the south is made visible by excavation. The new course of the summer dike is mainly determined by the excavation.

Initiator

The Huissensche Waarden project is carried out by a private initiator. One of the implications is that no SNIP-procedure is carried out, but an EIA procedure. Furthermore this variable influenced the power position of stakeholders. The initiator finances the whole project and is a large land tenant. Because the initiator finances the plan it offers the opportunity for stakeholders to see demands granted without financing. In this case the governmental groups mainly benefited from this opportunity. The governments on their turn are important for the initiator for realising the excavation. The fact that the initiating party finances the project resulted indirectly in a powerful alliance between the governments and the initiator. Relations were also affected by the fact that no kbg was installed, but stakeholders were asked for advice individually. Because of this no relations are seen between all active stakeholders, resulting in two clear alliances. In the design the choice for a private initiator resulted in a desanding volume that results from economic motives. Furthermore it led to a higher entrance road to the industrial area to guarantee accessibility at high water.

Contextual factors

Previous phases

In the PKB few reactions were given on plans for this project. Likely reason for this is that plans for the project were already in an advanced stage before the measure was included in the PKB and consultation had taken place. Because few reactions were given during consultation in the PKB the impression might be raised that the project is supported by the environment, while in reality opposition is seen.

Natura 2000 area

Second contextual factor is that the area is part of a Natura 2000 area. Because of this current natural values must be preserved and new nature can only be developed if it focuses on specific aspects. Opponents of the project used the argument that the area is located in a Natura 2000 area and nature must be conserved. Characteristic of stakeholders that are influenced are the interests. However, the influence on the design was larger. In the SNIP 3 phase the lands between the relocated summer dike and winter dike remained mostly unchanged compared to the current situation. Nature development is focused on habitats favoured in the Natura 2000 policy for this area. Differences between SNIP 2a and SNIP 3 show that the Natura 2000 objective of conservation initiated the change of agricultural nature managed lands to production grasslands. Target types of habitats determined the type of developed nature, favouring the change to forest near the river in SNIP 3.

Location

The last contextual factor considers the location. The floodplain is located in an urbanised region. Due to this there is a demand for nature and recreation. Logically this affected interests of stakeholders, but also power of stakeholders. Specific knowledge of nature and recreation organisations became more important than in a case where nature and recreation would be less demanded. In the design the demand for recreation is fulfilled by facilities at Zwanewater and desanding lake and by various extensive facilities. Little nature is development due to the Natura 2000 status.

3. COMPARISONS

This chapter compares projects to get insight in the influences of independent variables on stakeholder characteristics and which aspects influence changes in the SNIP 3 phase. Table 11 shows the independent variables of all cases.

Table 11: Independent variables of projects

Project	Measure	Proposed land use PKB(*)	Initiator
Noordwaard	Depoldering	Agriculture & Nature	Rijkswaterstaat
Veessen-Wapenveld	High-water channel	Agriculture	Province
Ruimte voor de Lek	Floodplain excavation	Nature & Recreation	Province
Huissensche Waarden	Floodplain excavation	Nature	Private

3.1. NOORDWAARD VS. VEESSEN-WAPENVELD

The first comparison is considers the depoldering of the Noordwaard and construction of the high water channel between Veessen and Wapenveld (VW). Both measures are carried out in currently protected areas and can be considered as dike relocations. These measures are realised in rural areas, Noordwaard is also partly located in the Biesbosch NP. Both projects have a preferred land use of agriculture, in the Noordwaard case this is combined with nature. Initiator of Noordwaard is RWS, for VW the Province of Gelderland, so in both cases the process is initiated by a government.

3.1.1. Independent variable

This comparison is used to investigate the influence of differences in proposed land use, especially the influence of adding nature next to agriculture. Looking at stakeholder characteristics the following differences result from a different type of land use:

- Interest nature organisations;
- Power position nature organisations.

The interests of nature organisations are related with the type of land use proposed after realisation. By proposing nature it is made explicit that opportunities are offered for nature organisations. Because more possibilities are created, nature organisations became more interested in the project.

The power position of nature organisations was influenced by the choice for developing nature. In the Noordwaard project SBB was included in the group of nature organisations, resulting in a higher power position of this group. Inclusion of SBB resulted in a level of authority and more land tenure of nature organisations because SBB is the land tenant of the Natura 2000 area. The usefulness of specific knowledge of nature organisations was higher in Noordwaard too, increasing their power position.

Another difference is the positions of farmers and residents in the Power-Interest Diagram. However, this results from overlap between these stakeholders and the influence of land tenure on the power position. In Noordwaard actual land tenure is analysed, favouring residents, while in VW land tenure is based on land use, favouring farmers.

3.1.2. Changes in design

In both projects several changes are implemented in the SNIP 3 phase. These changes are shortly presented in Table 12 and ranked on specific subjects.

Independent variables

The first independent variable is the type of land use after realisation, for Noordwaard agriculture in combination with nature and for VW only agriculture. Looking at the changes made in SNIP 3 it is seen that for Noordwaard this variable causes some small changes. For agriculture water levels of dry grassland polders in the flow-through area are lowered, for nature channels are given a more natural layout. In VW this variable leads to changes for agricultural purposes.

The type of measure is another independent variable that causes changes in SNIP 3. For Noordwaard the type of measure results in new locations for the relocation of residents. For VW the type of measure caused more changes in SNIP 3. These changes mostly deal with reducing the negative influence of the dike for the environment, but also try to reduce nuisance for agriculture caused by the dikes. Also adaptation of the slope of the dike results from the type of measure.

The last independent variable is the type of initiator. In both cases a public organisation forms the initiator, which is RWS for Noordwaard and the Province of Gelderland for VW. No direct influences are noticed on the type of initiator. However, it can be seen that changes in VW favour interests of the initiator more than in Noordwaard.

Table 12: Changes in design Noordwaard vs. Veessen-Wapenveld

	Noordwaard	Veessen-Wapenveld
1.Nature	More natural layout channels in wet grassland polders	Cycling path not on top of dike near EMS area
		Changes in layout zone along Grote Wetering
2.Recreation	Wider channel Fort and recreation area Werkendam	Construction of small scale recreation facilities
	Narrow entrance creeks to prevent nuisance	Hiking path in new floodplain
	Vegetation between residents and channels reduces nuisance	Canoe route not linked with river anymore
3.Cultural heritage	Lowering dike Fort Steurgat	Removal vegetation along old river course
4.Negative influence spatial quality	Dike transformer house less visible	Shifting eastern dike for more room between dike & residents
		Planting orchards at Vorchten
5.Objectives	Replacing of nature in flow-through area	Steeper inner slope dikes
6.Agriculture	Lower water level dry grasslands	Shifting of western dike to maintain allotment
		Adaptation water system
		Removal dwelling mounds from channel area
7.Residents	New locations houses	Adaptations near Het Oever
		Road network better connects villages than in earlier phases

Stakeholder characteristics

Stakeholder characteristics can also initiate changes in the design. Especially interests of stakeholders show a direct relation with changes in SNIP 3. For Noordwaard interests of residents cause most prominent changes, especially the demand of residents to reduce nuisance due to recreation. Lowering the dike at the fort and the demand for new locations of houses were also initiated by this group. Executive governments benefit from changes improving nature and recreation developments, while nature organisations initiate changes on nature and reducing negative influences on spatial quality. In VW farmers specifically benefit from changes for agriculture, while residents mostly favour changes that reduce negative influences on spatial quality and deterioration of the living environment. Executive governments favour changes that enhance nature and recreation and that improve accessibility of the area east of the channel.

Other stakeholder characteristics are power and relations. In Noordwaard residents, executive governments and nature organisations are powerful stakeholders, together with the supervising governments. Changes favour interests of residents, which have a conflict with the initiator of Noordwaard. Other powerful stakeholders have a good relation with the initiator. The supervising governments have made changes in the design favouring specific interests of residents to improve the relation with this group. In VW changes follow interests of residents, farmers and the executive governments. Together with the supervising governments these three groups are the most powerful stakeholders. Between these local stakeholders and governments conflicts arise. The changes in the design mostly favour residents, farmers and the initiator. Residents share some changes with the initiator and with the changes the initiator tries to improve the relation with residents. The latter also counts for farmers, a group that conflicts with the initiator but face changes in SNIP 3 to their advantage.

Contextual Factors

The last distinguished factor that influences changes in the design is formed by contextual factors. In previous phases of Noordwaard a design was composed by the stakeholders and eventually appointed as the SNIP 2a Design. Because of this cooperation changes in SNIP 3 are more focused on details than in VW, where less cooperation occurred in previous phases. For VW earlier phases negatively influenced relations between governments and residents and farmers. This resulted to farmers that stepped out of the kbg. With this action a statement was made towards the initiator. In SNIP 3 some changes fulfil parts of important interests of farmers.

The Eigeman resolution that was proposed during discussion of the PKB, appointed the province as initiator and initiated the spatial development plan. The plan reduced power of nature and recreation organisations because nature and recreation developments are mostly carried out after the construction of the high water channel. The plan also resulted in some changes that support development of nature and recreation.

The last contextual factor that influenced changes in Noordwaard is its location near Biesbosch NP, next to its natural value also used for recreation. The location near the Biesbosch resulted in a typical type of nature, with amongst others a natural layout of channels. Boating is a popular form of recreation in the Biesbosch, inducing the change to make a wider channel between Noordwaard and Steurgat. Part of the Noordwaard project area is currently located in the Natura 2000 area of Biesbosch, which likely has played a role in the appointment of nature as part of the preferred land use. The channel of VW separates villages east of the channel from villages west of the channel. However, the villages east of the channel are dependent on the villages west of the channel for their services. For this the road network was adapted to maintain the current connection between the villages as much as possible.

Conclusion

Looking at the factors that have induced changes in SNIP 3 in these projects it is concluded that for Noordwaard especially interests of stakeholders were dominant. For VW a larger role of independent variables and contextual factors is identified. Furthermore fewer changes were visible in Noordwaard.

Changes in these projects are in both cases used to improve relation with the initiator and conflicting parties, in these cases residents and farmers. In VW the contextual factors had a rather high impact on changes, while in Noordwaard the context of the location resulted in two small changes. This is explained by the fact that in Noordwaard cooperation was noticed in earlier phases and the design that was produced in interactive sessions was chosen as the SNIP 2a Design. This resulted in more satisfied stakeholders and SNIP 3 was used to optimise the design.

In Noordwaard desired land use caused some changes and the location for new houses is a direct result of depoldering. In VW the influence of the independent variable of land use is not clear because of the contextual factor of the farmers leaving the kbg. The type of measure resulted in more changes that reduce negative influences on the landscape, due to the dikes that must be constructed.

3.2. NOORDWAARD VS. RUIMTE VOOR DE LEK

In this paragraph the Noordwaard and 'Ruimte voor de Lek' (RvdL) projects are compared. Noordwaard will face depoldering, thus affecting currently protected lands. For RvdL excavation will be carried out in the floodplains. Both projects focus on nature as future land use in combination with recreation (RvdL) or agriculture (Noordwaard). In both cases a public party is the initiator, for Noordwaard RWS and for RvdL the Province of Utrecht. RvdL is located in the Utrecht agglomeration, while Noordwaard is located in a rural area and partly in the Biesbosch NP.

3.2.1. Independent variable

Comparing these projects enables to investigate the influence of different type of measures. Depoldering takes place in an area currently protected against flooding and RvdL is carried out in a floodplain. Differences in stakeholder characteristics in SNIP 3 are:

- Amount of stakeholders involved;
- Power position of farmers and residents;
- Amount of conflicts.

In Noordwaard more stakeholders are involved than in RvdL. This is explained by the fact that depoldering affects a larger and currently protected area. Because of this more opportunities to realise interests are seen and thus the project becomes more interesting for several parties. Comparing the projects shows that in Noordwaard farmers, public companies and an inland shipping association are involved, while in RvdL these groups are absent.

Another point that comes forth is the different power position of farmers and residents, partly resulting from choosing a measure in- or outside the winterbed. Farmers and residents in Noordwaard have a larger share and amount of land tenure than in RvdL. The land of these groups is also more essential for realising depoldering than for floodplain excavation. These aspects resulted in an increase of the power position of farmers and residents.

The last distinguished difference is the amount of conflicts. In the SNIP 3 phase conflicts occurred in both cases, but in Noordwaard more conflicts were noticed. One of these conflicts is about the uncertainty in compensation agreements. This conflict can be related to the fact the measure is carried out in currently protected areas, raising the demand for compensation on expected losses.

3.2.2. Changes in design

In both cases changes in the design (see Table 13) are induced in the SNIP 3 phase.

Table 13: Overview changes Noordwaard vs. 'Ruimte voor de Lek'

	Noordwaard	Ruimte voor de Lek
1.Nature	More natural layout channels in wet grassland polders	Side branches excavated channels
2.Recreation	Wider channel Fort and recreation area Werkendam	More facilities extensive recreation
	Narrow entrance creeks to prevent nuisance	Less intensive recreation Nieuwegein & island
	Vegetation between residents and channels reduces nuisance	
3.Cultural heritage	Lowering dike Fort Steurgat	Old river courses more visible
		Vegetation around parcels
4.Negative influence spatial quality	Dike transformer house less visible	Forest near bridges and WWTP
		Sand pit Waalse Waard not visible
5.Objectives	Replacing of nature in flow-through area	Summer dike relocation
6.Agriculture	Lower water level dry grasslands	-
7.Residents	New locations houses	-

Independent variables

The proposed land use for both projects considers nature alongside another land use, for Noordwaard this other land use is agriculture and for RvdL recreation. Table 13 shows that nature causes one change in

both projects, focusing on excavated channels. In Noordwaard a naturally looking channel is preferred, while in RvdL possibilities for specific vegetation caused excavation of side channels. Agricultural motives caused a lower water level in some polders of Noordwaard to make that polder better workable. Creating recreation in RvdL resulted in more extensive facilities, but facilities for intensive recreation were removed.

The change in Noordwaard for new locations of houses resulted from the choice for depoldering. The choice for the type of measure indirectly causes changes because it offers opportunities for spatial development. In RvdL the influence of the measure is more directly noticeable because floodplain excavation is used to make old river courses visible again and for creating side branches of channels.

Both cases have a public initiator, but no direct influence of the initiator is seen in the changes. However, it is noticeable that in RvdL changes favour the interests of the initiator more than in the Noordwaard case. RWS is mostly interested in a project that realises a certain water level drop, while the Province of Utrecht focuses more on spatial developments.

Stakeholder characteristics

One of the stakeholder characteristics are interests of a stakeholder. The analysis shows that interests directly influence changes. In the depoldering project residents of Noordwaard benefit of most changes. Changes to reduce nuisance of recreation and relocation of residents are initiated by this group. The change for agriculture was initiated by farmers and likely supported by Noordwaard residents because the overlap between the two groups. Nature organisations cause changes favouring nature and for reducing negative impacts on the landscape. The gentler dike slope is also used as place of refuge for animals. Changes for development of nature and recreation are also supported by executive governments. The other stakeholders involved for Noordwaard cause some specific changes in SNIP 3. In RvdL most changes are widely supported. Less intensive recreation at Nieuwegein is opposed by recreation organisations and aspects on cultural heritage show some neutral stakeholders. In total the nature organisations and residents in Nieuwegein and executive governments initiate most changes of RvdL.

The other characteristics of stakeholders are power and relations. These characteristics influence which changes are eventually included in the design. As mentioned before residents of Noordwaard, a group with a high power position, benefit from several changes. Conflict is seen between these residents and the initiating group. The initiator might have chosen to keep a powerful group satisfied by meeting an important interest (nuisance of recreation) as much as possible. The stakeholder that suffers from this decision (recreation organisations) is compensated with another small change that favours its interest. Other changes are initiated by several parties and widely supported. In RvdL the influence of power is not clearly visible because changes are widely supported. The subject of the conflict on intensive recreation shows that the interest of the executive governments (including the initiator) overrules the interest of the residents of Buitenstad. This can be explained by the higher power position of the executive governments, showing that in this project power is only used in conflict situations.

Contextual Factors

Also contextual factors induced changes in the design. In RvdL opposition of housing plans in earlier phases resulted in a layout of Bossenwaard complying with the demands of the opponents (residents and nature organisation of Nieuwegein). These groups favoured nature development in the area and opposed intensive recreation. Extensive recreation was agreed upon between stakeholders. In Noordwaard cooperation was noticed in earlier phases, which resulted in changes that have a more detailing character.

The urban location of RvdL stimulated the demand for nature and recreation facilities. Increased extensive recreation and changes for nature are stimulated by the location. Also the changes to reduce negative influence of obstacles for spatial quality result from the urban location. For Noordwaard the nearness of Biesbosch NP caused some changes. This fact party resulted in the change for a more natural layout of the channels in the wet grassland polders. The Biesbosch also has a recreational function, which was translated to Noordwaard with a larger excavation of the channel between the fort and reserved recreation area of Werkendam in SNIP 3.

The status of leading project for Noordwaard resulted in a conflict between initiator and the residents and farmers of Noordwaard about compensation. In order to increase the relation with the affected stakeholders the initiator granted several demands that comply with interests of these stakeholders.

These changes consider a decrease of nuisance due to intensive recreation and by improving the agricultural perspective of dry grassland polders in the flow-through area.

Conclusion

Comparing these projects shows changes in design result from several aspects. Stakeholder characteristics have affected most changes because this includes interests of stakeholders. Every change can be related to the interest of one or more stakeholders. For RvdL interests showed overlap with the contextual factors and independent variables on nature and extensive recreation. Changes in RvdL have a larger scale than the changes in Noordwaard. This is a result from the cooperation in earlier phases in the Noordwaard, while in RvdL opposition was seen in SNIP 2a.

In both cases the power characteristic of stakeholders is used, but in different ways. In RvdL the executive governments used its power to see its interest for intensive recreation near Buitenstad realised. In Noordwaard a powerful stakeholder is compensated for negative effects by including changes favouring their interests. In both cases the relation of initiator with local residents conflicts and intensive recreation causes stressed relations.

Independent variables have more influence on changes in RvdL than in Noordwaard. In Noordwaard some small adaptations are made in favour of the proposed land use and the type of measure resulted in new locations of houses in SNIP 3. For RvdL changes were made on the subjects of nature and recreation, both also a proposed land use in the PKB. The choice for floodplain excavation also offered the opportunity to excavate former river courses, forming a way to realise specific interests.

In both cases the initiator is a public party, but differences are seen in how is dealt with conflicts. In RvdL the initiator, an executive government, conflicts with local residents. In the design of RvdL the interest of the initiator is maintained and no changes are made in favour of the conflicting stakeholder. In Noordwaard the initiator is included in the group of supervising governments and shows conflict with residents too. In SNIP 3 changes are made in favour of the residents with the purpose to improve the relation between residents and the initiator. The difference in how is dealt with conflict situations can be explained with two aspects. Firstly the initiator of the Noordwaard has the interest of realising a project within a framework, while in RvdL the initiator is directly involved in the spatial planning aspect of the project. Furthermore the power position of residents is higher in the Noordwaard project.

3.3. RUIMTE VOOR DE LEK VS. HUISSENSCHE WAARDEN

The last comparison is between the ‘Ruimte voor de Lek’ (RvdL) and Huissensche Waarden projects. These projects are both floodplain excavations and their proposed land uses are nature (Huissensche Waarden) or nature with recreation (RvdL). Initiator of RvdL is the Province of Utrecht, thus a public party, while for the Huissensche Waarden this is a private initiator. Furthermore both projects are located in urbanised areas and currently mainly used for agricultural purposes.

3.3.1. Independent variable

Comparing the projects gives more insight in the influence of the type of initiator. These projects show that stakeholder characteristics in the SNIP 3 phase are clearly influenced by the choice for a private initiator. Choosing a private initiator results in the following differences on stakeholder characteristics:

- Decrease of power supervising governments, residents, nature and recreation organisations;
- Creation of alliances;
- An advising Interactive role of governments.

The decrease of power for several stakeholders results from influences of the private initiator on land tenure and finances. In public projects supervising governments are large land tenants and financiers, while in this private project the initiator has made investments in the past by buying land and finances all aspects of the project. The other mentioned stakeholders face decrease in power because of the mentioned influence of the initiator on land tenure and are generally not involved in funding.

The relations of a stakeholder with other stakeholders are affected by the inclusion of a private initiator. In Huissensche Waarden two alliances are visible and stakeholders only maintain relations with stakeholders within their alliance. This is a result from the way the initiator involves stakeholders, which is done in a bilateral way. In public projects a SG and kbg are installed where stakeholders discuss the project and create relations with other stakeholders.

The last influence of a private initiator is that the interactive role of governments is changed from partner and initiator to advisor. The role of initiator is by definition located at the private initiator. Because of the choice for an individual approach of stakeholders no SG was seen. The SG normally consists of the governments, so their interactive role was affected by the choice for not establishing a SG.

3.3.2. Changes in design

During the SNIP 3 phase several changes are made in the design. For these projects the changes are divided in five subjects, schematically presented in Table 14.

Table 14: Overview changes ‘Ruimte voor de Lek’ vs. Huissensche Waarden

	Ruimte voor de Lek	Huissensche Waarden
1.Nature	Side branches excavated channels	Banks excavation lake gentler
		Forest between industries
2.Recreation	More facilities extensive recreation	Improvement of facilities for the planned intensive recreation
	Less intensive recreation Nieuwegein & island	
3.Cultural heritage	Old river courses more visible	Old river courses more visible
	Vegetation around parcels	More conservation of current values in landscape
4.Negative influence spatial quality	Forest near bridges and WWTP	Vegetation around industries
	Sand pit Waalse Waard not visible	
5.Objectives	Summer dike relocation	-
6.Agriculture	-	Maintaining current agricultural grasslands in north & south

Independent variables

In both projects the proposed land use is nature, while in RvdL also recreation is appointed. Changes show that for these projects some change are favouring development of nature in the floodplain. In both cases these changes focus on the enhancement of development of specific types of nature. In Huissensche Waarden nature development in the north and south of the floodplain is removed from the design and

the currently visible agriculture is maintained in these areas. The influence of appointing recreation for RvdL is only visible in the change that creates more facilities for extensive recreation in the project area. Intensive recreation is removed from the plans in specific parts of the project area.

The second independent variable is the type of measure. In both cases this type of measure is used to grant specific interests, which is to make old river courses visible in the landscape again. Excavation also offers opportunities for nature development and reducing negative influences on spatial quality. In RvdL a planned channel is removed and a summer dike will be relocated.

The last independent variable is the initiator of the project. In paragraph 3.3.1 the influences of a different initiator is seen. Looking at the changes made in SNIP 3 RvdL shows some changes in favour the interests of the initiator, whereas this is not the case in the Huissensche Waarden project.

Stakeholder characteristics

Interests of stakeholders directly affect changes in the design. All changes result in some way from a demand of a stakeholder. Changes on nature development and improving spatial quality are in both cases supported by all groups. Changes in RvdL show much support among stakeholders. In this project most changes favour the executive governments and the residents and nature organisations of Nieuwegein. In Huissensche Waarden some adaptations are made that for nature development. Also changes for cultural heritage and reducing negative influences on spatial quality deal with nature aspects. This favours the interests of executive governments and nature organisations. Executive governments also favour the facilities for intensive recreation planned in the lake. A large difference between the designs of Huissensche Waarden is the reappearance of agricultural land in SNIP 3, which especially favours the interests of farmers. Reason for this reappearance is the following paragraph.

Which interests are included in the changes is partly determined by the power and relation characteristics. In RvdL the initiator has used its power to see its demand for intensive recreation at Buitenstad granted, even though a conflict was seen with local residents. In Huissensche Waarden changes mainly favour nature organisations and executive governments because they enhance nature development. Investigation of the relations among stakeholders pointed out two alliances in this project. The alliance of the initiator sees most of its interests already in the design and only the executive governments largely benefit from the change. This is because the changes made mostly consider nature development. This is also supported by nature organisations, but their focus is still on reducing the volume of excavation. For this group the changes on nature development can also be considered as a way to improve the relation between both alliances.

Contextual Factors

The last factor that induces changes arises from the context. In RvdL the influence of previous phases caused some changes. In previous phases nature organisations and residents of Nieuwegein opposed plans for housing in Bossenwaard. In the SNIP 3 phase these two groups are favoured by several changes, especially those that favour extensive recreation and nature development in Bossenwaard and the removal of intensive recreation.

The urban location of RvdL influenced the demand for development of nature and recreation. In RvdL it is seen that most changes consider these subjects. For Huissensche Waarden the location in an urban area led to an increased demand for recreation and nature. Both subjects face changes in the design.

In Huissensche Waarden another aspect of the location is that it is situated in a Natura 2000 area. Natura 2000 has the objective to preserve current natural values and nature development is only allowed when it meets certain requirements and specifically focuses on developing specific types of vegetation. For the Huissensche Waarden these requirements initiated the change from natural grasslands in SNIP 2a to production grasslands as in the current situation in SNIP 3. This context also gave direction to the type of nature that is developed.

Conclusion

Looking at the changes made in SNIP 3 in both projects, it becomes clear that in both cases the changes are initiated by a mixture of factors. All changes are resulting from a specific interest and thus from stakeholder characteristics. However, in RvdL the independent variable of land use also influences the changes made. In Huissensche Waarden the influence of proposed land use is less visible. In both cases contextual factors also cause specific changes, both on the subject of nature development. In RvdL

the context also influenced recreation, showing overlap with the proposed land use. At Huissensche Waarden Natura 2000 gave direction to nature development, but also hampered this by demanding maintenance of current land use. Thus, the independent variable of land use can be considered as a guideline for spatial layout as long as it complies with boundaries such as Natura 2000 and seepage. The type of measure shows opportunities for fulfilling demands in these two projects.

The supervising governments acts on the background and intervenes when a design affects certain aspects, like seepage, as in RvdL. Changes are commonly supported by the other stakeholders, but in RvdL this is more evident than in Huissensche Waarden. At the Huissensche Waarden the context of Natura 2000 resulted in changes that favour agriculture and specific types of nature development. This context favoured mainly stakeholders that are part of the alliance with low power. In the Huissensche Waarden process the volume of desanding is still subject to discussion, but no changes are made in this phase. The changes in SNIP 3 do not oppose of favour interests of the initiator, because its interests are already granted in earlier phases. In RvdL the executive governments have used their power to maintain recreational facilities at the Buitenstad area, which conflicted with interests of local residents. These point out that in conflicts power is used, but that the context of Natura 2000 is more powerful.

4. DISCUSSION

Analysis of the case studies and the comparisons resulted in several conclusions, mentioned in Paragraph 0. However, during this study several aspects came forth that influenced conclusions. These aspects are discussed in this chapter, as well as some findings that were seen during this study.

Dynamics of a process

One of the characteristics of a network is its dynamics (de Bruijn & ten Heuvelhof, 2007). Dynamics were also visible during the analysis of the various cases. Analysing initial phases showed characteristics of interests and relations are subject to dynamics. Part of the dynamics became noticeable after comparison of the SNIP 2a and SNIP 3 Designs.

In the 'Ruimte voor de Lek' (RvdL) case dynamics of interests are evident. In the preceding SNIP 2a phase plans were seen for housing, but these plans were removed in SNIP 3. Also within the SNIP 3 phase dynamics of interests were noticed. In RvdL a former river course was planned to be excavated early in SNIP 3, but in the end of this phase the design did not include this excavation. Dynamics of interests not only show removal of interests but also cause opportunities. In RvdL walking paths were introduced, which led to the demand that this path must be accessible for disabled people. This shows that including interests cause new demands that elaborate on the granted interest.

Because relations only face substantial changes between phases, it is stated that relations are less dynamic than interests of stakeholders. The Noordwaard case shows an opposing attitude of local stakeholders (i.e. farmers and residents) at the start of the process has turned into a more collaborative behaviour of these groups in SNIP 3. This is also visible between the SNIP 2a and SNIP 3 phases of RvdL. Analysis of the cases pointed out that mainly relations of farmers and residents show dynamic behaviour.

The power characteristic shows least dynamic behaviour of stakeholder characteristics in SNIP 3. Some power means are mainly static, like authority and specific knowledge. This shows that stakeholders can only change their power positions by adapting land tenure and finances, which are most prone to dynamic behaviour. However, during case analysis these power means showed little dynamics. The initiator buys lands needed for realisation of the project, but other stakeholders do not raise power by increasing land tenure. Finances also show no differences in the SNIP 3 phase. However, to get more insight in dynamics of land acquisition and financing more data is needed over time.

Strategic behaviour of stakeholders

During this research strategic behaviour of stakeholders was observed. Strategic behaviour is defined as actions of stakeholders that are not determined due to considerations concerning content, but aim at increasing the power position in the network (de Bruijn & ten Heuvelhof, 2007).

The Veessen-Wapenveld case shows strategic behaviour of farmers. This group stepped out of the klankbordgroep (Sounding Board, kbg) to make the statement they were not satisfied with the design and stakeholder involvement. In this case farmers remained consulted on agricultural subjects. After leaving the kbg several changes were made in the design that favoured interests of farmers. This indicates that by stepping out of the kbg farmers succeeded in adapting the design according to their interests.

Analysis of the SNIP 2a phase of the RvdL project indicated other strategic behaviour. In this phase plans for housing were seen, causing opposition of residents of Nieuwegein. This group managed to get the housing plans debated in the city council of Nieuwegein, one of the executive governments, by influencing the largest local political party (Gemeente Nieuwegein, 2008). By applying this strategy residents of Nieuwegein managed to prevent the housing plans and thus saw their interest granted.

The two distinguished methods of strategic behaviour show that strategic behaviour occurs in conflict situations. Related with this is that strategic behaviour is applied by farmers and residents, also the two groups that show most opposition. In both cases strategic behaviour is observed at a stakeholder with the highest power position after the governments. This can explain the fact why strategic behaviour is beneficial for the stakeholders showing this behaviour in both cases.

Initiator

One of the investigated independent variables is the type of initiator for the project. Comparison of the Huissensche Waarden and RvdL projects clarify differences that can be contributed to the type of initiator. However, comparison of Noordwaard and RvdL also pointed out differences that are allocated to the different public initiators. Within the public initiators distinction is made between initiators part of supervising governments and initiators belonging to executive governments.

In the Noordwaard-RvdL comparison differences that are contributed to the initiator consider the relations of stakeholders and how is dealt with conflicting interests. In the Noordwaard case a change is induced that favours the interest of the initiator, but does not oppose interests of other stakeholders. Veessen-Wapenveld en RvdL both have an initiator included in the executive governments. These cases point out that the initiator has direct interest in the spatial layout of the design, focusing on nature and recreation development. Especially plans for recreation result in conflict with local stakeholders. This shows that an initiator of the executive government negatively affects relations between stakeholders.

Another difference between public initiators is how they deal with conflicting situations. The initiator of the supervising governments seeks compensation for stakeholders negatively influenced by some facets of the design. By doing this the relation with opposing stakeholders will improve and the design will be more supported by stakeholders. In the Noordwaard case residents suffering from planned intensive recreation are compensated by reducing additional nuisance due to recreation. The cases with an initiator of the executive governments show that interests of this group remain included in the design, even though it causes opposition. Furthermore no compensating changes for the opposing stakeholder were noticed in these cases. This indicates that initiators of executive governments are more willing to use their power to secure their interests. In the RvdL case this is seen at the development of intensive recreation near Vianen, in Veessen-Wapenveld this is less evident due to influence of a contextual factor (the Eigeman resolution). Usage of power by governments might result in more opposition and conflict in later phases of the process and stakeholders that do not support the design process anymore.

Characteristics

Part of the objective of this research was to investigate how stakeholder characteristics were influenced by independent variables. This provides insight in which characteristics are easiest affected and which characteristic is most insensitive to the distinguished independent variables in SNIP 3.

The three comparisons show that the power characteristic is most influenced by independent variables. This is reflected in the different power aspects that vary. Authority can be influenced by including a governmental party in a stakeholder group. Nature organisations in the Noordwaard case raised their power position by making SBB active. However, not all stakeholders have a governmental representation and can gain power in this way. Finances face variation in the Huissensche Waarden project, where a private initiator is responsible for funding of the complete project. In public initiated projects only governmental stakeholders can gain power by financing, because other stakeholders have limited financial resources. The amount of land tenure is influenced by procurement of lands by the initiator, behaviour that is noticed in all cases. The initiator needs these lands for realising the project, but the growing land tenure also increases its power. Except the behaviour of the initiator, no indications are noticed that stakeholders gain power with more land tenure. Specific knowledge can also be changed by including another stakeholder, just like authority. In the Noordwaard case the supervising governments included a Ministry, gaining knowledge on the specific subjects of this ministry. In contrast to the authority aspect of power, more stakeholders can apply this method of raising power.

Relations are mainly influenced by the way stakeholders are involved in the project. However, the Noordwaard and Veessen-Wapenveld cases show opposition amongst local residents and farmers in initial phases. Thus, relations in initial phases are influenced by the type of measure. Through the process this opposition is turned into collaboration (Noordwaard) or conflict (Veessen-Wapenveld) by applying different methods of stakeholder involvement. Collaboration is noticed when the design is composed by stakeholders, while conflict occurs when stakeholders do not perceive any influence on the design process. This shows that relations in the SNIP 3 phase are influenced by stakeholder involvement in initial phases. The Huissensche Waarden case points out that bilateral involvement of stakeholders results in formation of alliances, which can be prevented by establishing a kbg as in the other cases.

The interests of stakeholders in the SNIP 3 phase are least influenced by independent variables. The RvdL and Huissensche Waarden projects show that the type of measure makes interests possible, in this

case excavation of former river courses. Earlier phases show more influences of independent variables on interests. The proposed land use and type of initiator have hardly influence on interests in SNIP 3. Interests that result from these independent variables are included in earlier designs.

Changes

The second part of the objective considers influence of stakeholder characteristics on the SNIP 3 design. The changes eventually implemented in the design are in general widely supported, while the scale of the changes depends on collaboration in initial phases. The more cooperation exists between stakeholders, the smaller the changes are. The importance of cooperation for implementing changes shows that relations have more influence on changes than the power characteristic. However, changes included in the design directly relate to interests of stakeholders, pointing out that this characteristic has the most impact on changes.

Comparison of the cases showed similarities in the implemented changes. Except for Huissensche Waarden, facilities for intensive recreation are replaced by facilities for extensive recreation. However, elements of intensive recreation remain included in the design. This illustrates that intensive recreation is debated and extensive recreation supported. Small changes considering nature development are seen in all cases, indicating detailing of this part of the design. This detailing indicates that nature development is already widely supported earlier in the process. RvdL and Huissensche Waarden changes make aspects of cultural heritage in the landscape visible. In inner diked measures changes on cultural heritage focus on maintaining current values. In all design vegetation is placed around obstacles that negatively influence the landscape, like heavy industries, highways and WWTP's. The Noordwaard and Veessen-Wapenveld cases also see changes focusing on good perspectives for living and agriculture.

Changes that result from requirements needed for granting permits are also noticed in all cases. However, the subject of change differs in the cases. In the projects near urban areas (RvdL and Huissen) seepage formed an important aspect, causing change in RvdL. In Noordwaard and Huissen changes were made to comply with nature standards. For Noordwaard this considered nature compensation, for Huissen nature conservation due to Natura 2000. Natura 2000 is a European programme focusing on nature conservation. In Veessen-Wapenveld the demand for cost reduction caused change in the design.

Methodology

The outcome of this study results partly from methodological choices. In this paragraph the influence of these choices on the conclusions is discussed.

The effect of the limited amount of comparisons influences the generality of the conclusions. Because of this, conclusions have a more indicative character. Future research must point out if the conclusions of this study count for more projects. Aiming on the SNIP 3 phase placed some influences of independent variables in other phases outside the scope. However, by analysing initial phases of the projects some of these influences become visible in this study. The distinction between residents and farmers in separate stakeholder groups resulted in some overlap between these groups. This overlap was mainly visible at the division of land tenure. To make a clearer distinction between residents and farmers land use will give a better indication of land tenure.

Related to this is the assessment of power. With the used method differences in power means disappear. This can result in a power position of a stakeholder that is actually different than the assigned power position. The actual power position also depends on timing of the acquired data on land tenure. Analysis of the case studies pointed out that the initiator starts buying out other stakeholders early in the process. This can result in a higher assessed power position of the initiator and lower power of the land selling stakeholders.

5. CONCLUSIONS & RECOMMENDATIONS

This chapter presents the conclusions of this research, along with some recommendations. Conclusions are discussed according to the four subquestions. Combined, these questions provide insight in the influence of characteristics of projects on stakeholder characteristics and their influence on changes in the design. This research focuses on the following characteristics:

- 1) Land use after realisation;
- 2) Type of measure;
- 3) The type of initiator.

Recommendations concentrate on design-supporting models and stakeholder involvement.

5.1. CONCLUSIONS

Initial situation

Analysis of the initial situation of the case studies showed that the initial situation influenced the SNIP 3 phase in several ways. Especially relations between stakeholders were influenced by the initial situation.

The independent variable of proposed land use after realisation is influenced by another governmental programme, aiming at realising the Ecological Main Structure (EMS). This programme aims to realise a connection between nature areas. This favoured the development of nature in the design process. Realisation of the EMS was included in the RftR-objective to improve spatial quality wherever possible. The subjective definition of spatial quality caused debate with local stakeholders during consultation of the PKB. This put the relation between governments and local stakeholders under pressure since the start of the programme. The debate on spatial quality was most intensive in areas where inner diked measures were planned.

Relations in SNIP 3 were also influenced by stakeholder involvement in preceding phases. Collaboration is noticed in cases with early involvement of stakeholders, showing importance of timing involvement. Another prerequisite for collaboration is that stakeholders perceive influence on the design.

Similarities in characteristics

Even though case studies have a different setting, several similarities in stakeholder characteristics are distinguished in this research. These similarities mostly consider overlapping interests.

Governmental stakeholders show some identical interests in all cases. Supervising governments focus on requirements for granting permits. Executive governments enhance development of nature and recreation. Non-governmental stakeholders also show identical interests, but with a case-specific application. Aspects of cultural heritage are enhanced by nature organisations. Residents demand a good living environment by maintaining the open view and no increase in nuisance. Farmers demand conservation of their working environment. In all cases objects with a negative impact on the landscape are taken out of sight.

The power and relation characteristics show much less similarities. Governments have high power position, recreation organisations have low power. Similarities in relations largely depend on matching interests. This results in cooperation between governments and recreation organisation in all cases. In public projects nature organisations also collaborate with governments. Farmers and residents maintain good relations. Relations of residents and farmers with governments are prone to conflict, especially in inner diked measures. Also between residents and recreation organisations conflicts are seen.

Independent variables

The introduction of this chapter already pointed out which independent variables are distinguished and analysed in this research.

In the SNIP 3 phase the type of measure and type of initiator have the largest effect on stakeholder characteristics. Power and relations of stakeholders are mostly influenced by these independent variables.

Land use after realisation directly influences the usefulness of specific knowledge, thus the power position. However, the influence of specific knowledge on power is rather small. The stakeholder with

usefulness knowledge for realisation also maintains a good relation with the initiator since the start of the project, showing an indirect effect of the appointment of a land use. Thus, influences of land use after realisation is low in SNIP 3, but indications are seen that earlier in the process this influence is higher.

The second characteristic of the project is the type of measure. Choosing an inner or outer diked measure has several consequences in the SNIP 3 phase. Inner diked measures show higher power of farmers and residents, resulting from their increased influence in land tenure. Inner diked measures are more costly, resulting in larger differences in financing of the project. In inner diked measures also conflict is likely to occur between the supervising government and the residents and farmers of the area. Subject of this conflict is damage compensation. The outer diked measures in this study consider floodplain excavation, which is used for granting the interest of excavation former river courses. This shows that the type of measure also offers opportunities for realisation of interests.

The last considered independent variable is the type of initiator. Distinction was made between public and private initiators. In the case with a private initiator the initiator applied a bilateral stakeholder approach. This resulted in formation of alliances. In cases with a public initiator a board of stakeholders was established, leading to more relations between stakeholders. It can be concluded that relations between stakeholders depend on the stakeholder approach applied by the initiator. Independent of the stakeholder approach is the effect on power of stakeholders. The private initiator finances all aspects of the project and is an important land tenant. Thus, private projects introduce a powerful stakeholder, leading to lower power by other stakeholders.

During the process differences were noticed among public initiators. The differences consider how an initiator deals with conflict situations. Executive governments maintain aspects in the design that favour their interests, but cause opposition by other stakeholders. On the contrary, supervising governments compensate stakeholders that are negatively influenced by implemented changes. The differences can be explained by the fact that executive governments have more direct interests, while supervising governments only focus on a design that meets requirements for granting the permits.

The influences of independent variables of the project on stakeholder characteristics are schematically presented in Table 15.

Table 15: Influence independent variables on stakeholder characteristics

Independent variable	Interest	Power	Relations
1. Land use after realisation	-	Power position stakeholder with specific knowledge on land use	-
2. Type of measure	Realisation interest, depending on measure	Power position residents and farmers	Conflict between supervising government & local stakeholders
3. Type of initiator	-	Power positions financers & land tenants	Depending on stakeholder approach initiator Dealing with conflict situations

Changes in SNIP 3 Design

The last aspect of this research considers the changes introduced in designs during the SNIP 3 phase. Much correlation is noticed between the included changes and interests of stakeholders. Implemented changes were also widely supported by stakeholders. This shows that in SNIP 3 good relations are more useful for inclusion of changes than power. Combining this with aspects from Table 15 gives the following ranking of independent variables that can cause changes in the design:

- 1) The type of measure;
- 2) The type of initiator;
- 3) Land use after realisation.

However, independent variables hardly influence interests. This also leads to the conclusions that independent variables have a small effect on changes made in the SNIP 3 Design. Because interests are part of stakeholder characteristics it is found that changes in the design are most sensitive to aspects of stakeholder characteristics. Along with stakeholder characteristics and independent variables, contextual factors also cause changes.

The scale of the changes largely results from relations between stakeholders in preceding phases. In cases with little cooperation in earlier phases larger changes were introduced. This shows that early cooperation results in more detailing of the design in SNIP 3. Changes made in SNIP 3 mostly enhance development of extensive recreation. Other subjects that are often changed consider nature development, cultural heritage in the landscape and elements that negatively influence the landscape. These changes are proposed by several stakeholders. Notable is that changes introduced by the supervising government are always included in the design. This is explained by the fact that aspects introduced by supervising governments are needed for granting the permits. The case studies showed that in SNIP 3 these changes consider requirements for seepage, nature compensation and costs. Some adaptations in the design have the purpose to improve relations with conflicting stakeholders by granting important interests.

5.2. RECOMMENDATIONS

Investigation of the cases in this research resulted in several recommendations. These recommendations focus on design supporting models and involvement of stakeholders.

Design supporting models

Models can be used to assist during the composition of designs. This research pointed out that collaboration among stakeholders is reached when they perceive influence on the design. This can be reached by letting stakeholders compose a design with help of design supporting models. This design can be used as a base during the rest of the process. To retain cooperation it is recommended that the design composed by stakeholders is formally approved. For this, the design must meet requirements needed for granting permits. In this research several of these requirements were noticed. Implementing these requirements in a design supporting model result in a design composed by stakeholders, that meets demands for permits.

The first requirement considered seepage in urban areas, which must not exceed a certain value. Seepage increases when specific measures are carried out near residential areas. By prohibiting seepage-increasing measures in a zone around residential areas this requirement is met. Another aspect that showed up in this research is nature compensation. By indicating how much of a specific type of vegetation must be compensated a design can be made that also suits this requirement. The last aspect considers costs. By implementing this in the model, cost management is also included in the design process.

Involving stakeholders

This research also points out recommendations for stakeholder management. Farmers and residents are the groups that most often show opposition, especially at inner-diked measures. For this it is recommended that extra attention is given to these groups during involvement of stakeholders.

To promote cooperation between stakeholders early involvement is necessary, as well as showing stakeholders that their interests are taken into account in the design process. In this way a cooperative climate is created, which will have a positive effect on the design.

In order to let the design be the output of an interactive process that focuses on win-win situations it is recommended that the initiator is a neutral party. In this research the most neutral stakeholder group are the supervising governments. This group is interested in an end-result that fits within the boundaries stated beforehand, like the budget and time. This initiator also compensated stakeholders, leading to more support of the eventual design.

For stakeholders active in the process it is recommended to aim at relation management. By aiming at relation management a stakeholder can induce its interest in the design, because support is needed among all stakeholders. Power is only useful in conflict situations.

The last recommendation aims at stakeholder involvement in private projects. Instead of using a bilateral approach it is advised to establish a sounding board group and steering group in which stakeholders are involved. In this way more relations will be seen between stakeholders, resulting in a more cooperative attitude.

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APPENDIX A: EXPLANATION SNIP-PROCEDURE

SNIP (Spelregels for Natte InfrastructuurProjecten, Rules for Wet Infrastructure Projects) is an internal guidance document for water managing and retaining projects within the Ministry of Infrastructure & Environment. For a controlled realisation of the RftR programme, decisions on the funding of the planning study and implementation are taken in accordance with SNIP. The planning study is formed by the first three SNIP Decision Points, while the realisation phase is formed by SNIP 4 to 6 (Rijkswaterstaat, 2008).

Table 16: Overview SNIP phases (Rijkswaterstaat, 2008) (Rijkswaterstaat, 2005)

SNIP-phase		Explanation SNIP phase	EIA activities
Scheme of approach	Phase that leads to a scheme of approach including a management plan.	By signing an administrative agreement or project assignment the contract for the planning study is given. Three months after signing a scheme of approach including a management plan must be submitted to PDR.	Composing Explorative Report
SNIP 2a phase	Phase that leads to the Chosen Alternative Decision	In this phase the balance between different alternatives/variant and the preferred alternative (PA) is tested and a decision is taken on working out the PA.	Composing Starting Note EIA; Announcing Starting Nota EIA; Consultation & Advice; Advise Guidelines by EIA Commission; Guidelines EIA; Composing EIA.
SNIP 3 phase	Phase that leads to Project Decision	In this phase the PA is developed into a Project Design (PD). After the Project Decision by the State Secretary a decision can be taken by the competent authorities in the region.	Composing draft zoning plan; Submitting EIA and draft zoning plan; Assessing acceptability EIA; Announcing EIA and draft zoning plan; Consultation & advice; Advice EIA Commission; Determining zoning plan; Announcing zoning plan; Concerns zoning plan; Approval Zoning plan; Possible appeal at State Council.
SNIP 4 phase	Project Decision by Competent Authority		Evaluation consequences environment
	Phase that leads to Preparation Decision	Determining Project Decision and several plans and permits	
SNIP 5 phase	Phase that leads to Realisation Decision	'Go' for start physical realisation	Evaluation consequences environment
SNIP 6 phase	Phase that leads to Delivery Decision	Delivery Decision	Evaluation consequences environment

Another important procedure is the EIA procedure. The EIA procedure is an assessment that must be carried out in order to look at the impact of a project on its environment, which consists of natural, social and economic aspects. This procedure is more generally known than the SNIP procedure and therefore an overview is made of the EIA activities that are carried out in each SNIP phase in Table 16.

APPENDIX B: NOORDWAARD

APPENDIX B.1: INTERESTS

In this Appendix the interests of the stakeholders involved in the Noordwaard project are presented, along with some background information.

The interests of the supervising governments can be summarised in one main interest, which is the realisation of the depoldering of the Noordwaard within the objectives considering time and costs. Another main point is that vegetation in the flow-through area must not exceed a height of 30 cm in order to fulfil the hydraulic objective.

The executive governments show two interests. Firstly this group wants to improve recreation in the area. This is done by creating the facility for development of a marina near Werkendam. At Spieringsluis the current port is slightly expanded. Furthermore farmers have the opportunity to develop recreational side-activities. Another interest is that loss of nature must be compensated.

Nature organisations have some main interests with respect to nature and its protection. For protecting natural values and the environment they only want extensive recreation to be realised. Near Spieringsluis this is accepted but near Werkendam more intensive recreation is planned. Just like the executive governments nature organisations demand compensation for loss of nature in the through-flow area. The last interests state that silence of the area must be guaranteed at all times and that places of refuge are needed for animals and cattle in cases of high water.

The residents of the Noordwaard have several interests. They demand a good accessibility, which is threatened by recreation because the main entrance includes a lifting bridge. More road and water traffic near Werkendam can result in longer waiting times for this bridge. Also during realisation of the project they demand good access. Furthermore, residents want to preserve unique points of the Noordwaard, which are quietness and open views. For suffered damage they ask compensation. Residents desire no deterioration of privacy and noise nuisance due to recreation. Residents also fear increased traffic in the area, resulting in unsafe traffic situations. Because the high diked polders have a different inundation frequency than other polders, residents also fear effects of seepage. Together with the demand for compensation, seepage is part of the boundary conditions for the design. Many new houses are planned along the excavated creeks. Residents demand small piers in these creeks in order to situate their boats nearby. Residents near Spieringsluis protested against initial plans of expansion of the marina. Eventually this resulted in construction of a small pier near the lock.

Other residents are residents of the Steurgat area of Werkendam, a residential area west of the Steurgat waterway. This group demands conservation of their view. This also has drawbacks on plans for dike improvement along the Steurgat. Furthermore they demand no nuisance which will be caused by increased recreation near the residential area. Also this area is mainly accessed by the Biesboschsluis with its lifting bridge. This group fears accessibility will worsen due to longer waiting times at the bridge.

The farmers are a group with several interests in the project. This group is part of the residents of Noordwaard. Farmers desire the opportunity to develop recreational side-activities. This is allowed for a limited amount of accommodation units to prevent nuisance by residents. Another reason for this amount is to let recreationists experience the silence and space of the Noordwaard. However, many farmers indicated they want to provide more units. Another important issue for farmers is that future prospects for agriculture must be good. This is done by maintaining good drainage and effective layout of agricultural parcels. Furthermore the fields must be accessible for machines. If farmers need to move, they demand a good replacement alternative and compensation for the damage suffered.

Main interest of the recreation industry is creation of new recreational facilities in the area. This is done by abolishment of the stand-still principle for boats and by creation of recreational facilities. Furthermore the museum will be expanded and extensive recreation is planned near Spieringsluis. The recreation sector also demands good access of all creeks for boats. This is done in some creeks, but not in creeks that end up near residents to guarantee their privacy and reduce nuisance.

In the SNIP 3 phase the association for inland shipping has two demands. The first is the construction of a safe harbour near the inlet of the Noordwaard. However, Rijkswaterstaat opposed these plans

because it would affect the hydraulic efficiency. Therefore it is not possible to grant this interest, even though it is supported by the Werkendam town council. The other demand is that the connection between the creeks and Nieuwe Merwede is removed. According to this group this would lead to siltation in the Merwede main channel Merwede and a permanent water level drop.

Public companies only desire that their utilities are accessible at all times with heavy traffic. However, to maintain stability of the dikes it is not possible to drive with heavy traffic on the dikes during high water. Therefore this interest could not be granted.

Table 17: Interests depoldering Noordwaard

Stakeholder	Interest at start SNIP 3	Priority	Interest at end SNIP 3	Difference
1. Supervising Governments	1. Compliance to objective	High	-	Boundary condition
2. Executive Governments	1. Improve recreation	High	-	Granted as much as possible
	2. Compensation for nature loss	Medium	-	Granted
3. Nature organisations	1. Only extensive recreation	High	Only extensive recreation	Partly Granted
	2. Compensation of nature	High	-	Granted
	3. No disturbance of silence	Medium	-	Granted
	4. Places of refuge for animals	Low	More places of refuge	Granted
4. Residents Noordwaard	1. Good accessibility	Medium	-	Granted as much as possible
	2. Preservation unique points	Medium	-	Granted as much as possible
	3. Good compensation arrangement	High	More clarity desired	Boundary condition
	4. No nuisance due to recreation	High	No nuisance due to recreation	Granted as much as possible
	5. Safe traffic situation	Medium	Safe traffic situation	Granted as much as possible
	6. No seepage problems	High	-	Boundary condition
	7. Small piers for residents	Low	-	Granted
	8. No expansion of marina Spieringsluis	Medium	-	Granted
5. Residents Steurgat	1. Conservation view	High	Dike as low as possible	Granted as much as possible
	2. No nuisance due to facilities on dike	Medium	-	Granted
	3. Accessibility guaranteed	High	-	Granted as much as possible
6. Farmers	1. Development of side activities at farms	High	More accommodation units at farms	Granted, but not enough
	2. Good future prospects agriculture	High	-	Granted as much as possible
	3. Good replacements and compensation	High	More clarity desired	Boundary condition
7. Recreation Organisations	1. Creation of recreational facilities	High	-	Granted
	2. Good access of all creeks	Medium	Boat accessibility in dead-end creeks	Partly granted
	3. Expansion of Museum	Medium	-	Granted
8. Inland shipping association	1. Construction of safe harbour	High	-	Not possible
	2. No direct connection creeks with Merwede	Medium	-	Not granted
9. Public companies	1. Accessibility heavy traffic guaranteed at all times	Medium	-	Not possible

APPENDIX B.2: CHARACTERISTICS OF STAKEHOLDERS

Table 18: Overview characteristics Noordwaard

Stakeholder	Interest at start SNIP 3	Priority	Authority	Finances	Ground	Specific Knowledge	Alliance	Conflict	Interactive role	Interest granted?
1. Supervising Governments	1. Compliance to objective	High	National-Regional	1	Creeks, high diked polders, floodplains, lower diked agricultural polders	Permits, Project experience, Water, Nature & agriculture	2,3,7	4,6	Initiator	Boundary condition
2. Executing Governments	1. Improve recreation	High	Regional-Local	-	Public roads	Permits, Regional and local knowledge & demands, Spatial Planning	1,3,6,7,8		Partner	Granted as much as possible
	2. Compensation for nature loss	Medium								Granted
3. Nature organisations	1. Only extensive recreation	High	Local	-	Banks of the creeks and Hilpolders	Local & regional nature and nature demands	1,2,4,6		Advisor	Partly Granted
	2. Compensation of nature	High								Granted
	3. No disturbance of silence	Medium								Granted
	4. Places of refuge for animals	Low								Granted
4. Residents Noordwaard	1. Good accessibility	Medium	-	-	Polder Steenenmuur, wet grasslands, intertidal area, residential parcels	Local knowledge and demands, agriculture	3,6	1	Advisor	Granted as much as possible
	2. Preservation unique points	Medium								Granted as much as possible
	3. Good compensation arrangement	High								Boundary condition
	4. No nuisance due to recreation	High								Granted as much as possible
	5. Safe traffic situation	Medium								Granted as much as possible
	6. No seepage problems	High								Boundary condition
	7. Small piers for residents	Low								Granted

	8.No expansion of marina Spieringsluis	Medium								Granted
5.Residents Steurgat	1.Conservation view	High	-	-	Fort Steurgat, residential areas	Local knowledge and demands			Consultant	Granted as much as possible
	2.No nuisance due to facilities on dike	Medium								Granted
	3.Accessibility guaranteed	High								Granted as much as possible
6.Farmers	1.Development of side activities	High	-	-	Recreation area Werkendam, wet grasslands, some fields in Polder Steenenmuur	Agriculture, Local knowledge and demands	3,4,7	1	Advisor	Granted but not enough
	2.Good future prospects agriculture	High								Granted as much as possible
	3.Good replacements and compensations	High								Boundary condition
7.Recreation Organisations	1.Creation of recreational facilities	High	-	-	-	Local recreation (extensive and intensive) and recreational demands	1,2,6		Advisor	Granted
	2.Good access of all creeks	Medium								Partly Granted
	3.Expansion of Museum	Medium								Granted
8.Inland shipping association	1.Construction of safe harbour	High	-	-	-	Shipping	2		Consultant	Not possible
	2.No direct connection creeks with Merwede	Medium								Not granted
9.Public Companies	1.Accessibility heavy traffic guaranteed at all times	Medium	-	-	Land at transformation station & water reservoir, Canal Fort, parcels Steenenmuur	Public utilities			Consultant	Not Possible

APPENDIX C: VEESEN-WAPENVELD

APPENDIX C.1: INTERESTS

In the Veessen-Wapenveld project several interests of five stakeholders were noticed. In this Appendix some more background is given on the different interests of these groups.

The supervising governments desire a project that complies with the stated objective. After approval of SNIP 2a the Minister asked for options to save costs and time. These aspects are important and all other interests can only be granted when they do not negatively influence the boundaries.

The second group consists of the executive governments. This group demands a connection between the EMS areas north and south of the project area. Realisation of the EMS is one of the main programmes which must be realised by regional government. Furthermore the area has recreational potential due to its surrounding landscape. Executive governments see the opportunity within the spatial development aspect of the Eigeman resolution to improve recreational facilities. Some recreation mentioned in the spatial development is carried out alongside construction of the channel. In the spatial development plan mostly plans for extensive recreation are included, because plans are not specific enough to be constructed along with the channel. Construction of the dikes must not lead to poor accessibility of the area. This is an important issue for executive governments as well as residents. Eventually this is translated into a boundary condition. An interest with less priority is conservation of cultural heritage. Some old farms are located in the area as well as some aspects in the landscape. As long as it fits within the plans, the executive governments want to maintain or accentuate elements of cultural heritage.

In the northern part of the channel area an EMS area is located for foraging of grassland birds. Nature organisations want to conserve this area. Conservation is also needed for obtaining permits for realisation of the project. Nature organisations also support the ecological connection zone between EMS areas north and south of the project area along the Grote Wetering and new western dike. In the project area a former river course is noticed, which can be accentuating by vegetation. Another demand of nature organisations is that the possibility is created to enjoy nature. By constructing small scale facilities, like a bird-viewing hut, it becomes possible to experience nature in the area.

Residents of the area have several main concerns. Firstly they want to preserve openness in the area, which is done by conserving agriculture. The dikes must be located as far away from the villages as possible and must be taken out of sight as much as possible. Accessibility is demanded at all times, with no negative effects for emergency services. For the hamlet of Het Oever a small levee is constructed to protect their homes. Furthermore residents demand clarity on damage compensation and their safety situation. During high water the channel will be filled, resulting in a temporal island. This affects the feeling of safety of the residents, who feel they are trapped. The associated nuisance of construction roads must be minimised, as well as the effect of these roads on traffic safety. Other demands of residents are a safe traffic situation and conservation of privacy and characteristic vegetation. By separating cycling paths slow traffic does not share the road anymore with motorised traffic, which enhances traffic safety. Residents show little opposition on creation of recreational facilities in the area, as long as their privacy is guaranteed.

Farmers stepped out of the kbg, but are still consulted by the initiator on subjects specifically considering their interests. Their interests concentrate on a good perspective for agriculture. Farmers fear that allotment in the area will worsen due to the construction of the dikes. They demand an optimum allotment for their companies after realising the channel. The area in the channel is poorly drained because of clayey soil, while good drainage is essential for agriculture. After usage of the hwc the land must be quickly available for agriculture again. Farmers demand damage compensation. Currently this agreement states that farmers can only sell their land to governments. Farmers fear that the government eventually will use the ground in another way than for agricultural use. Another demand from the farmers is that parcels must be good accessible for machines and cattle. Farmers offered to maintain the new EMS zone next to the Grote Wetering and the new floodplain near the inlet of the channel. However, plans for maintenance of the area are not completed yet.

The last involved group are recreation organisations. These organisations are especially interested in plans for area development. Corresponding with these plans they want to enhance recreational

infrastructure of the area, mostly by creating cycling and walking paths. Furthermore some plans are noticed for intensive recreation, but these plans are not part of the hwc-project.

Table 19: Interests Veessen-Wapenveld

Stakeholder	Interest at start SNIP 3	Priority	Interest at end SNIP 3	Difference
1.Supervising Governments	1. Compliance to objective	High	-	Boundary condition
2.Executive Governments	1.Realisation EMS Connection at Grote Wetering	High	-	Granted
	2.Improving recreational facilities	High	Improving recreational facilities	Granted as much as possible
	3.Conservation cultural heritage	Medium		Granted as much as possible
	4. Good accessibility area	High	-	Boundary condition
3.Nature organisations	1. Conservation EMS area	High	-	Granted
	2.Ecological connection next to Grote Wetering	High	-	Granted
	3.Old river course IJssel made visible	Low	Make old river course more visible	Partly granted
	4. Facilities to enjoy nature	Medium	-	Granted
4.Residents	1.Conservation of openness and agricultural character landscape	High	Better perspectives agriculture	Granted as much as possible
	2. Good accessibility at all times	High	Good accessibility at all times	Boundary condition
	3.Clarity on compensation and safety	High	Still uncertainty exists	Boundary condition
	4. Safer traffic situation	Medium	-	Granted
	5. No construction roads near residential areas	High	As little nuisance as possible due to construction	Boundary condition
	6. Conservation characteristic vegetation in channel	Low	-	Granted
	7. Dike as less visible as possible	High	Dike as less visible as possible	Granted as much as possible
	8. Conservation privacy	Medium	-	Granted
5.Farmers	1.Good allotment after measure	High	Good allotment after measure	Granted as much as possible
	2.Good drainage in area	High	Good drainage in area	Granted as much as possible
	3.Good compensation agreement	High	Good compensation agreement	Boundary condition
	4.Good accessibility parcels in channel	Medium	-	Granted
	5.Maintenance new nature and floodplain	Low	Maintenance new nature and floodplain	Not possible yet
6.Recreation Organisations	1. Realisation intensive recreation	High	Realisation intensive recreation	Not granted
	2. Enhancing recreational infrastructure	Medium	-	Granted

APPENDIX C.2: CHARACTERISTICS OF STAKEHOLDERS

Table 20: Overview characteristics Veessen-Wapenveld

Stakeholder	Interest at start SNIP 3	Priority	Authority	Finances	Ground	Specific Knowledge	Alliance	Conflict	Interactive Role	Interest granted?
1. Supervising Governments	1. Compliance to objective	High	National-Regional	1	Ditches, floodplain, few areas in hwc area, dikes, summer bed river	Permits, Project experience, Water, Spatial Planning, Infrastructure & Environment	2,3,6	4,5	Partner	Boundary condition
2. Executive Governments	1. Realisation EMS Connection at Grote Wetering	High	Regional-Local	2	Sports fields, roads, area planned for building	Permits, Regional and local knowledge & demands, Spatial Planning	1,3,6	5	Initiator, Partner	Granted
	2. Improving recreational facilities	High								Granted as much as possible
	3. Conservation cultural heritage	Medium								Granted as much as possible
	4. Good accessibility area	High								Boundary condition
3. Nature organisations	1. Conservation EMS area	High	-	-	Areas in floodplain, some parts at Veluweflank, Small areas in and around the hwc	Local & regional nature and nature demands	1,2,4,6		Advisor	Granted
	2. Ecological connection next to Grote Wetering	High								Granted
	3. Old river course IJssel made visible	Low								Partly granted
	4. Facilities to enjoy nature	Medium								Granted
4. Residents	1. Conservation of openness and agricultural character landscape	High	-	-	Various parcels spread through the complete area, clustering at villages, Veluweflank and higher grounds	Local knowledge and demands, agriculture	3,5	1	Advisor	Granted as much as possible
	2. Good accessibility at all times	High								Boundary condition
	3. Clarity on compensation and safety	High								Boundary condition
	4. Safer traffic situation	Medium								Granted
	5. No construction roads near residential areas	High								Boundary condition

	6. Conservation characteristic vegetation in channel	Low								Granted
	7. Dike as less visible as possible	High								Granted as much as possible
	8. Conservation privacy	Medium								Granted
5.Farmers	1.Good allotment after measure	High	-	-	Many plots in the hwc-area and across the other zones.	Agriculture, Local knowledge and demands	4	1,2	Consultant	Granted as much as possible
	2.Good drainage in area	High								Granted as much as possible
	3.Good compensation agreement	High								Boundary condition
	4.Good accessibility parcels in channel	Medium								Granted
	5.Maintenance new nature and floodplain	Low								Not possible yet
6.Recreation organisations	1. Realisation intensive recreation	High	-	-	Some small areas on which facilities are already located (campsites, marina)	Local recreation (extensive & intensive) & recreational demands	1,2,3		Advisor	Not granted
	2. Enhancing recreational infrastructure	Medium								Granted

APPENDIX D: RUIMTE VOOR DE LEK

APPENDIX D.1: INTERESTS

In this Appendix the interests of the stakeholders of the RvdL are presented. For each stakeholder the interests are mentioned, along with the priority and some background information.

The supervising governments are interested in the end result of the project and controls if the design meets the stated boundaries, like time, costs and safety.

The executive governments have four main interests. Firstly they want to realise the area according to the EMS, with a focus on the dynamics of a tidal river. Local governments also want to improve recreational facilities in the area. Plans are seen for expansion of the marina of Nieuwegein. On the southern bank a marina is constructed along with a parking lot for campers. Other demanded recreational facilities are extensive, like cycling and walking paths. The municipalities of Vianen and Nieuwegein also see the project as a possibility for upgrading the cityscape of their cities. In the SNIP 2a phase Nieuwegein wanted to realise this interest by housing in the floodplain, while Vianen brings aspects of cultural heritage back in the cityscape. Furthermore seepage must not increase due to the measure.

Nature organisations of Nieuwegein are mostly consulted for the layout of the Bossenwaard. They want to separate nature and recreation to prevent that visitors affect natural values in the area. In the SNIP 3 phase consensus was reached that only extensive recreation will be constructed, focused in the eastern part of the Bossenwaard where most surrounding residents live. Land use in the western part of the Bossenwaard will be mainly nature. Nature organisations of Nieuwegein want to make the former river course of the Kromme IJssel visible again. Furthermore they want to reduce the influence of the highway bridges on the landscape. The last demand of this group is to create an educational centre near the marina of Nieuwegein. However, due to uncertainty of financing and the plans the development of this centre is not included in the plans.

Nature organisations on the southern bank of the river focus more on increasing biodiversity and dynamic nature in the area. Especially the Vianense Waard seems suitable for this. However, fulfilling these interests by excavating this floodplain will increase seepage. By planning natural grassland this interest is partly granted. Also in this area the highway forms a visual obstacle for the area, as well as the appearance of a WWTP. By planting trees in front of these areas they are taken out of sight.

The interests with the highest priority for residents of Nieuwegein are maintenance of the open view over the floodplain and no nuisance that results from increased recreation in the area. Recreational development of the Ponthoeve is watched closely by this group because it can lead to nuisance. Currently the area suffers from criminal activities, so the new design must counteract this where possible. The citizens are also involved in the discussion about the focus of the Bossenwaard. They prefer extensive recreation in the area which is also accessible for less mobile residents. Other issues with lower priority are conservation of the location of the ferry to Vianen and decreased visibility of the highway. The ferry forms an important connection for slower traffic between the cities. The highway not only affects spatial quality of the area, it also causes noise pollution. This is also counteracted by placing trees.

Residents of Buitenstad area of Vianen are mostly concerned about consequences of the planned recreational facilities for their environment. They want no increased traffic along the main road and no nuisance due to the recreation. Furthermore they desire no increase of seepage, thus shortly they demand that their living environment is not affected. Another interest of this group is that the accessibility of the ferry and its location is changed.

The recreation organisations want to expand the marina of Nieuwegein. Furthermore they want an adaptation of the marina mouth to prevent siltation that currently occurs. These demands are not fulfilled because of the effects on financial and time risks. Furthermore plans are not investigated enough to include it in the design. The Ponthoeve is also divided in this group, because it wants to develop a so-called 'Natuurderij', a farm that combines extensive recreational facilities and nature. Several facilities for extensive recreation were included, but the demand remains for more fishing spots. Hiking paths in the floodplain are connected with currently existing paths to create a regional network of hiking paths.

Table 21: Interests 'Ruimte voor de Lek'

Stakeholder	Interest at start SNIP 3	Priority	Interest at end SNIP 3	Difference
1.Supervising Governments	1. Compliance to objective	High	-	Boundary condition
2.Executive Governments	1.Realisation EMS area	High	-	Granted
	2.Improving recreational facilities	Medium	Improving recreational facilities	Granted as much as possible
	3.Improving cityscapes of Nieuwegein & Vianen	Medium	Improving cityscapes	Partly granted
	4. No deterioration of seepage situation	High	-	Boundary condition
3.Nature organisations Nieuwegein	1. Separating nature and recreation in Bossenwaard	High	-	Acceptance of recreation
	2.Education centre near marina	Low	-	Not possible
	3.Old river course Kromme IJssel made visible	Medium	-	Granted
	4. Fitting highway in landscape	Medium	-	Granted
4.Nature organisations Vianen	1.More biodiversity and wet nature in floodplains	High	More biodiversity and wet nature in floodplains	Partly Granted
	2. Fitting highway & WWTP in landscape	Medium		Granted
	3.Dynamic nature, managed by private people	High	More dynamic nature	Partly Granted
5.Residents Nieuwegein	1.Conservation ferry Nieuwegein – Vianen	Medium	-	Granted
	2. Open view on floodplain	High	-	Granted
	3.No nuisance due to recreational facilities	High	No nuisance due to recreational facilities	Granted as much as possible
	4. Combining nature and recreation in Bossenwaard	High	-	Granted
	5. Fitting highway in landscape	Low	-	Granted
	6. Walking path for less mobile people	Low	-	Granted
6.Residents Buitenstad	1. Conservation ferry Nieuwegein - Vianen and its accessibility	Medium	-	Granted
	2. No increase of traffic through Buitenstad area	High	No increase of traffic through Buitenstad area	Granted as much as possible
	3. No nuisance due to recreational facilities	High	No nuisance due to recreational facilities	Granted as much as possible
	4. No deterioration of seepage situation	High	-	Boundary condition
7.Recreation organisations	1. Creating regional network of walking paths	Medium	-	Granted
	2. Accessible fishing spots	Medium	More accessible fishing spots	Partly granted
	3. Constructing walking, cycling and riding paths	High	-	Granted
	4. Fitting highway in landscape	Medium	-	Granted
	5. Expansion of marina Nieuwegein	High	Expansion of marina Nieuwegein	Not possible
	6. Adjusting marina mouth	High	-	Not granted

APPENDIX D.2: CHARACTERISTICS OF STAKEHOLDERS

Table 22: Overview characteristics 'Ruimte voor de Lek'

Stakeholder	Interest at start SNIP 3	Priority	Authority	Finances	Ground	Specific Knowledge	Alliance	Conflict	Interactive Role	Interest granted?
1. Supervising Governments	1. Compliance to objective	High	National-Regional	1	Dikes, Ditches, Areas in Bossenwaard West, 't Waalse Waard, Vianense Waard, Bridges, Hagestein Barrier	Permits, Project experience, Water	2,3,4,7		Partner, Initiator	Boundary condition
2. Executive Governments	1. Realisation EMS area	High	Regional-Local	2	Roads, eastern quay Merwede Channel	Permits, Regional and local knowledge & demands, Spatial Planning	1,3,4,7		Initiator, Partner	Granted
	2. Improving recreational facilities	Medium								Granted as much as possible
	3. Improving cityscapes of Nieuwegein & Vianen	Medium								Partly granted
	4. No deterioration of seepage situation	High								Boundary condition
3. Nature organisations Nieuwegein	1. Separating nature and recreation in Bossenwaard	High	-	-	Partly Kromme IJssel area, Part Bossenwaard West	Local nature and nature demands	1,2,4,5		Advisor	Acceptance of recreation
	2. Education centre near marina	Low								Not possible
	3. Old river course Kromme IJssel made visible	Medium								Granted
	4. Fitting highway in landscape	Medium								Granted
4. Nature organisations Vianen	1. More biodiversity and wet nature in floodplains	High	-	-	Area near WWTP	Local nature and nature demands	1,2,3,6		Advisor	Partly Granted
	2. Fitting highway & WWTP in landscape	Medium								Granted
	3. Dynamic nature, managed by private people	High								Partly Granted
5. Residents Nieuwegein	1. Conservation ferry Nieuwegein – Vianen	Medium	-	-	Part Bossenwaard west, East Bossenwaard	Local knowledge and demands	3,6		Advisor	Granted
	2. Open view on floodplain	High								Granted

	3.No nuisance due to recreational facilities	High								Granted as much as possible
	4. Combining nature and recreation in Bossenwaard	High								Granted
	5. Fitting highway in landscape	Low								Granted
	6. Walking path for less mobile people	Low								Granted
6.Residents Buitenstad	1. Conservation ferry Nieuwegein - Vianen and its accessibility	High	-	-	Areas in Mijnsheerwaard, Pontwaard, Vianense Waard	Local knowledge and demands	4,5	7	Advisor	Granted
	2. No increase of traffic through Buitenstad area	Medium								Granted as much as possible
	3. No nuisance due to recreational facilities	High								Granted as much as possible
	4. No deterioration of seepage situation	High								Boundary condition
7.Recreation organisations	1. Creating regional network of walking paths	Medium	-	-	Part Mijnsheerwaard, Pontwaard, 't Waalse Waard, marina Nieuwegein	Local Recreation (intensive & extensive) and recreational demands	1,2	6	Advisor	Granted
	2. Accessible fishing spots	Medium								Partly granted
	3. Constructing walking, cycling and riding paths	High								Granted
	4. Fitting highway in landscape	Medium								Granted
	5. Expansion of marina Nieuwegein	High								Not possible
	6. Adjusting marina mouth	High								Not granted

APPENDIX E: HUISSENSCHE WAARDEN

APPENDIX E.1: INTERESTS

This Appendix considers the interests of stakeholders that were noticed during analysis of the Huissensche Waarden project.

Supervising governments must check whether the project meets the objectives. An objective that was introduced in this case was the conservation of nature required by Natura 2000. Next to the general aspects of costs and time, the objective was also stated that the discharge distribution over the Nederrijn and IJssel must not be changed.

Executive governments have more project-specific demands. They want to develop nature according to the EMS plans. Nature in the floodplain must be good accessible to let people enjoy the natural value of the floodplain. Because of the conservation targets of Natura 2000 it was not possible to completely develop nature according to the EMS. Another point to improve value of the landscape is by fitting the industrial areas in the landscape. This is also done to decrease noise and dust nuisance that is currently suffered by residents of Huissen and Westervoort. Agricultural nature management is demanded by this group to develop new nature along the desanding lake. The second subject of interest of the executive governments is the development of recreational facilities in the area. In the current plans this is realised by planning a marina and upgrading the beach at the Zwanewater, but also by improving extensive recreation like angling-spots and hiking and cycling paths. Because of the influence of the industrial areas on employment in the region no deterioration of accessibility of these areas is allowed.

Nature organisations demand conservation of the current Natura 2000 area which is affected by the excavation plans. The plans also affect cultural heritage in the current landscape. The kolks are visible aspects of cultural heritage and can be maintained by creating space between the kolks and the excavation. Another part of cultural heritage in the landscape is the small scale of parcels located at the toe of the dike and around the Angerensche Strang and kolks. In the area some relics of old river courses are seen, which can be accentuated. By doing this the dynamic behaviour of the river becomes visible in the landscape. This group also demands facilities for making people aware of the natural values and the cultural heritage in the landscape.

In the project area some residents are located at the Looveer area. They do not want that the living environment of the area will decrease. One of the facets of the living environment is good accessibility to their homes with a safe traffic situation, while another aspect is the current open landscape in the floodplains. The seepage situation of the residents of Looveer and Huissen must not worsen. Residents of Looveer also have some demands considering layout of the industrial area, but these are seen independent of the desanding project.

Currently the project area is mostly used for agricultural purposes by farmers. Their demand is that as much agricultural land is available after realisation as possible. In the areas designated for nature development farmers have indicated that they are willing to maintain the areas according to the agricultural nature management principle.

Recreation organisations see the opportunity to develop recreational facilities in the area along with the realisation of the project. This group wants to construct a marina near the town of Huissen. Furthermore they see possibilities to improve recreational facilities at the Zwanewater and encourage the construction of facilities for extensive recreation.

The last stakeholder of this project is the initiator, which consists of a consortium of local companies located at the Looveer area and a desanding company. The project aims to develop nature and to increase spatial quality with desanding as economic base. Therefore the amount of desanding must be sufficient to finance the complete project. For this, the initiator has to comply with the objectives that are set by governments. This is essential in order to get the needed permits for realisation of the plans. Next to the financial aspect the initiator wants to increase accessibility of the Looveer area. This is done by heightening the road towards the industries.

Table 23: Interests Huissensche Waarden

Stakeholder	Interest at start SNIP 3	Priority	Interest at end SNIP 3	Difference
1. Supervising Governments	1. Compliance to objective	High	1. Compliance to objective	Boundary condition
2. Executive Governments	1. Development of new nature according to EMS with good accessibility of nature	High	-	Partly granted
	2. Improving recreational facilities	High	-	Granted as much as possible
	3. Better fit in landscape of industrial areas	Medium	-	Granted
	4. No deterioration accessibility industries	High	-	Boundary condition
	5. Agricultural nature management	Low	-	Partly Granted
3. Nature organisations	1. Conservation Natura 2000 area	High	-	Partly Granted
	2. Conservation cultural heritage in landscape	High	-	Partly Granted
	3. Small scale landscape near dike	Medium	-	Partly Granted
	4. Facilities to enjoy nature and cultural heritage	Low	-	Granted
	5. Making old river courses visible again	Medium	-	Partly Granted
4. Residents	1. Conservation of openness and agricultural character landscape	High	-	Partly Granted
	2. Good accessibility at all times	High	-	Boundary condition
	3. No deterioration seepage situation	Medium	-	Boundary condition
5. Farmers	1. Conservation of agricultural land as much as possible	High	-	Granted as much as possible
	2. Agricultural nature management after realisation	High	Agricultural nature management	Not possible yet
6. Recreation Organisations	1. Realisation marina	High	-	Granted
	2. Improving recreation at Zwanewater	Medium	-	Granted
	3. Improving extensive recreational infrastructure	High	-	Granted
7. Initiator	1. Sufficient excavation of sand pit	High	Sufficient excavation of sand pit	Boundary condition
	2. Compliance to objectives	High	-	Boundary condition
	3. Permittable design	High	-	Boundary condition
	4. Good accessibility industrial areas at high water	High	-	Boundary condition

APPENDIX E.2: CHARACTERISTICS OF STAKEHOLDERS

Table 24: Overview characteristics Huissensche Waarden

Stakeholder	Interest at start SNIP 3	Priority	Authority	Finances	Land tenure	Specific Knowledge	Alliance	Conflict	Interactive role	Interest granted?
1. Supervising Governments	1. Compliance to objective	High	National-regional	-	Dike, floodplain, ditches (land DLG)	Permits, Project experience, Water, Nature & Agriculture	2,6,7		Advisor	Boundary condition
2. Executive Governments	1. Development of new nature according to EMS with good accessibility of nature	High	Regional-Local	-	Kolks, roads	Permits, Regional and local knowledge and demands, Spatial Planning	1,6,7		Advisor	Partly granted
	2. Improving recreational facilities	High								Granted as much as possible
	3. Better fit in landscape of industrial areas	Medium								Granted
	4. No deterioration accessibility industries	High								Boundary condition
	5. Agricultural nature management	Low								Partly Granted
3. Nature organisations	1. Conservation Natura 2000 area	High	-	-	Parcel near Zwanewater	Local & Regional nature and nature demands	4,5	7	Advisor	Partly Granted
	2. Conservation cultural heritage in landscape	High								Partly Granted
	3. Small scale landscape near dike	Medium								Partly Granted
	4. Facilities to enjoy nature and cultural heritage	Low								Granted
	5. Making old river courses visible again	Medium								Partly Granted
4. Residents	1. Conservation of openness and agricultural character landscape	High	-	-	Parcels at Looveer	Local knowledge and demands	3,5		Advisor	Partly Granted
	2. Good accessibility at all times	High								Boundary condition
	3. No deterioration	Medium								Boundary

	seepage situation									condition
5.Farmers	1.Conservation of agricultural land as much as possible	High	-	-	Northern and southern grasslands	Agriculture, local knowledge and demands	3,4		Advisor	Granted as much as possible
	2.Agricultural nature management after realisation	High								Not possible yet
6.Recreation Organisations	1. Realisation marina	High	-	-	Kolk	Local recreation (intensive & extensive) and recreational demands	1,2,7		Advisor	Granted
	2.Improving recreation at Zwanewater	Medium								Granted
	3. Improving extensive recreational infrastructure	High								Granted
7.Initiator	1.Sufficient excavation of sand pit	High	-	1	Zwanewater, industrial areas, excavation area	Project experience, soil quality, insight in market	1,2,6	3	Initiator	Boundary condition
	2.Compliance to objectives	High								Boundary condition
	3.Licensable design	High								Boundary condition
	4. Good accessibility industrial areas at high water	High								Boundary condition

APPENDIX E.3: REPORT MEETING JAN VAN MIL (IN DUTCH)

Gedurende de PKB-fase is het project van de Huissensche Waarden de plannen in gelobbyd, er bestonden dus al plannen. Naast het financiële voordeel heeft het project ook het voordeel dat een uiterwaardvergraving een duurzamere oplossing levert en meer kan toevoegen aan ruimtelijke kwaliteit dan kribverlaging. Binnen het 'Ruimte voor de rivier'-programma blijft het project een vreemde eend in de bijt door de uitvoering door een private partij. Doordat er een private initiatiefnemer is wordt er geen SNIP-procedure gevolgd.

De benodigde waterstandsdeling wordt behaald door het verlagen van de zomerkade, een doorlaat (3/4 van doelstelling) en een verlaagde ruwheid. Dit deel van het project moet gerealiseerd worden voor 2015, de verdere ontzanding kan daarna uitgevoerd worden.

De initiatiefnemer is voor 100% verantwoordelijk voor de kosten. Dit zijn niet alleen aspecten voor de ontzanding, maar bijvoorbeeld ook recreatieve voorzieningen zoals de jachthaven. Tevens zorgt de initiatiefnemer ook voor een beheerplan en de bijbehorende financiering.

De grond in het gebied is ook grotendeels in het bezit van de initiatiefnemer. Tussen de initiatiefnemer en een andere grote grondbezitter is een afspraak gemaakt met betrekking tot opbrengst van de grond. De aanwezige boer op het Looveer-terrein pacht de grond voor de zandwinplas van de initiatiefnemer.

Het gebied is gelegen in een Natura 2000 gebied, waardoor het project moet voldoen aan de doelstellingen voor Natura 2000 die voornamelijk betrekking hebben op compensatie. Op dit moment dienen de Huissensche Waarden als fourageergebied voor ganzen. Deze ganzen worden met name aangetrokken door de aanwezige productiegroenlanden. Het verschil tussen de EHS en Natura 2000 is dat de EHS provinciaal beleid is dat voortkomt uit de Nota Ruimte (Nee, tenzij-principe), terwijl Natura 2000 een wettelijk natuurbescherming is vanuit de EU en strengere regels levert dan de EHS (Nee of compensatie). Door de ligging in een Natura 2000 gebied heeft het project in de PKB het gewenste landgebruik van natuur meegekregen.

Na de inspraak op de startnotitie mer zijn er 1-op-1-gesprekken gehouden met de verschillende insprekers, maar er is geen daadwerkelijke klankbordgroep opgericht. Verschillende insprekers hebben een alternatief opgesteld. Echter, dit alternatief is niet doorgerekend op economische haalbaarheid en op de natuurdoelstellingen. Hierdoor was het geen werkelijk alternatief. Dit alternatief is geïnitieerd door de boer op het Looveer (nertsenfokkerij) en de Gelderse Milieufederatie. De betrokken overheden in het project zijn naast het waterschap, de provincie en de gemeente ook het Ministerie van LNV doordat het project naast rivierversuiming ook natuurontwikkeling beoogd.

De bewoners van Huissen zijn over het algemeen vrij enthousiast doordat ze straks het gebied ook echt in kunnen. Door de aanleg van paden kan het gebied beter beleefd worden. Belangrijk punt voor deze groep is dat er geen toename van kwel optreedt. Verder staan ze positief tegenover de recreatieve ontwikkelingen aangezien ze nu vrij ver moeten reizen voor dezelfde voorzieningen. De contour van de plas is aangepast om tegemoet te komen aan de wens van de Historische Kring Huissen om de cultuurhistorische waarden niet aan te tasten. Verder worden er informatieborden geplaatst om de mensen bewust te maken van de cultuurhistorie van het gebied. Voor Lingewaard Natuurlijk wordt er een educatieprogramma over natuur gemaakt waardoor bewoners meer betrokken worden bij de natuurlijke waarden van de uiterwaard. De Gelderse Milieufederatie is tegen het project aangezien het om grootschalige zandwinning gaat, waar deze groep altijd tegen is. Op dit moment wordt voor beheer de voorkeur gegeven aan agrarisch natuurbeheer door lokale boeren zodat naast ganzenfourageergebied ook nieuwe natuur een kans krijgt. Onder andere de strang in het zuiden van het projectgebied en de oevers van de zandwinplas worden aangepakt ten behoeve van natuurontwikkeling. Verder is de aantakking van de zandwinplas met de rivier verplaatst door de aanwezigheid van beschermde vogelsoorten. Ook door het plaatsen van oobos wordt er nieuwe natuur ontwikkeld in het gebied. De dijk en de industriegebieden fungeren als hoogwatervluchtplaatsen. Plannen voor het uitgraven van strangen in het noorden zijn verhinderd aangezien deze de kwelsituatie zouden verergeren. Bij dit project heeft PDR met name veel wensen, maar door de vrij onafhankelijke status van het project heeft deze groep minder te zeggen. De plannen voor recreatie rondom gebouw 'De Brouwketel' nemen nog geen verdere vormen aan doordat er op dit moment nog een gezin woont. De geplande jachthaven zou een omvang krijgen van max. 400 ligplaatsen. Verder wordt het strandje bij het Zwanewater verplaatst onder andere vanuit het aspect van

verkeersveiligheid. Ook is er een fietspad gepland en worden er paden aangelegd voor mindervaliden. Het gehele gebied wordt toegankelijk voor wandelaars, mits er geen verstoring is van de natuur (bijv. in broedseizoen of bij beschermde soorten). Voor recreatie wordt er voornamelijk overlegd met brancheorganisaties. Het industriegebied wordt landschappelijk ingepast, onder andere op aanvraag van de gemeente Westervoort. Vanaf de rivierkant kan dit maar beperkt gedaan worden door de invloed van beplanting op de stroming.

Jan van Mil is ecooloog bij HSRO, het bedrijf dat het projectmanagement verzorgt voor de uiterwaardvergraving van de Huissensche Waarden.