Reconstructing the Kristalbad project

A case study on the process of a multifunctional water project studied through the conceptual lens of the Contextual Interaction Theory

Thesis submitted to the Faculty of Behavioural, Management and Social Sciences of the University of Twente in partial fulfilment of the requirements for the degree of Master of Science in Public Administration.

UNIVERSITY OF TWENTE.

Author

D.E. Mooiman - S1757776

Master: Public Administration

Specialisation: Policy and Governance

d.e.mooiman@student.utwente.nl

Amsterdam,

December, 2016

Graduation Committee

Internal supervisors, University of Twente

Dr. K.R.D. Lulofs - k.r.d.lulofs@utwente.nl

Prof. dr. J.T.A. Bressers - j.t.a.bressers@utwente.nl

External supervisor, water board Vechtstromen

Dhr. S. Nijwening - s.nijwening@vechtstromen.nl

Preface

This research project was undertaken at the request of water board Vechtstromen, where I undertook an internship from April to August, 2016. Within those months I learned more about water governance than I could have ever imagined. The enthusiastic behaviour of the colleagues at the water board worked encouraging and due to the support they gave me it felt 'like a warm bath'. I would like to thank the people at water board Vechtstromen for this interesting internship and the pleasant time. I particularly would like to thank my external supervisor from the water board S. Nijwening for his kind words and wise counsel; it served me very well.

I would like to thank my internal supervisors Dr. K.R.D. Lulofs and Prof. dr. J.T.A. Bressers from the University of Twente for their guidance and feedback during this process. I would like to thank my friends and family for their patience and their unlimited support. If I ever lost interest, you kept me motivated. S. Dillingh deserves a particular note of thanks for helping me out with editing the text; you were really supportive. Additionally, I also would like to thank all of the interviewees, without whose cooperation I would not have been able to conduct this research and get the insights they provided.

I hope you enjoy your reading.

Dieneke Mooiman

Amsterdam,
December, 2016

Abstract

This study explores the Kristalbad project; a multi-functional wetland located in the Eastern part of the Netherlands (between Hengelo and Enschede). In this project, that formed part of regional land development plan, multiple public actors (e.g. the regional water board, municipalities and the Province of Overijssel) collaborated on realising several – distinctive – objectives. What happened during the course of the process of the Kristalbad project that the different actors were working together? How were linkages created between the involved governmental institutions and in what way were these linkages maintained and influenced by involved actors? These questions led to the central research question: *What were the boundary spanning activities within the Kristalbad project that influenced the course of the process?* The research objective was to study the Kristalbad project by applying theoretical concepts of adaptive water management and boundary spanning to a concrete, realised project. In the study the framework of the Contextual Interaction Theory was used to describe the specific context of the Kristalbad project and to explain how actors interacted (by defining their core characteristics within interaction processes). By reconstructing the process a good insight was given on how the project developed, how the actors collaborated and what the crucial moments were. Connections between water-challenges and non-water-related matters and various challenges were made through broadening boundary judgements and applying boundary-spanning strategies. To answer the research question a qualitative research was performed. By analysing the primary and secondary data, such as interviews and policy records, was learned that objectives from the involved stakeholders were accommodated within the water board's project plan. By involving multiple sectors extra complexity was added, which created the opportunity to realise a plan where all the stakeholders benefitted from and agreed on.

Table of contents

List of figures

Definitions

Boundaries are perceived as inter- subjective constructed demarcations between different social worlds, which safeguard the system from its environment (Bressers and Lulofs, 2010; Huitema et al., 2006).

Boundary judgements are socially constructed definitions - which form part of the cognitions of an actor - of the domain of policy innovations in terms of relevant scales, sectors and temporal dimensions (Bressers, 2007).

Boundary spanning is an adaptive governance activity used by water managers that entails linking their sector, scales and timeframes to previously independent other sectors, scales and timeframes, whilst passing dividing lines between the (socially) indicated domains (Bressers and Lulofs, 2010).

Boundary spanning strategies (or activities) imply an active and strategic behaviour of finding new ways to integrate boundary judgements between competing actors and their interests, through boundary spanning.

Coupling is the process of creating or avoiding linkages between water managers and others of which collaboration is one important form (Huitema et al., 2006).

Coupling activities are actions at the start of a linkage with another actor, which may be personal, related to policies, procedures and even the cognitions of organisations, while domain perceptions of actors remain unaltered (Huitema et al, 2006).

Domains are defined by the socially constructed dimensions; sectors, scales and time perspectives (Lulofs and Bressers, 2010: 16).

Glossary

Land re-ordering committee	Landinrichtingscommissie
Land re-ordering act	Landinrichtingswet
Preparatory committee Enschede North	Voorbereidingscommissie Enschede-Noord
Provincial Executive	Gedeputeerde Staten (GS)
The Reconstruction Act	Reconstructiewet
Land development plan	Landinrichtingsplan
Urban fringes/outskirts	Stadsranden
Ministry of Agriculture, Nature and Fishery	Ministerie van Landbouw, Natuur en Visserij
The Ministry of Agriculture Nature and Food Quality	Ministerie van Landbouw, Natuur en Voedselkwaliteit (LNV)
Land consolidation	Ruil- en herverkaveling
Rural Areas Development Act	Wet Inrichting Landelijk Gebied (WILG)
Provincial advisory committees	Provinciale adviescommissies
Implementation committee	Uitvoeringscommissie
Management committee	Bestuurscommissie
Implementation module	Uitvoeringsmodule
Provincial council	Provinciale Staten
Sewage treatment plant (STP)	Rioolwaterzuiveringsinstallatie (RWZI)
Ecological corridor	Ecologische verbindingszone
National Ecological Network (NEN)	Ecologische Hoofdstructuren (EHS)
Nature and Countryside Policy Plan	Beleidsplan Natuur en Landschap Overijssel
EU Water Framework Directive (WFD)	EU Kaderrichtlijn Water (KRW)
Interreg 3B more space for water	Interreg ruimte voor water
Declaration of Intent	Intentieverklaring
General council	Algemeen Bestuur (AB)
Executive council	Dagelijks Bestuur (DB)
Agricultural Land Management Office	Bureau Beheer Landbouwgronden (BBL)
Rural Investment Budget	Investeringsbudget Landelijk Gebied (ILG)
Environment Vision Overijssel	Omgevingsvisie Overijssel

Chapter 1. Introduction

1.1 Introduction

The Netherlands has a high level of territorial and institutional fragmentation, as water management is carried out on multiple governmental levels and by different institutions. Central government, provinces, regional water authorities and municipalities all have concrete tasks and responsibilities (OECD, 2014). Herein, regional water authorities – also known as water boards[1] – are responsible for maintaining water levels, water quality and wastewater treatment (OECD, 2014). Water management in the Netherlands requires effective management of interdependencies between water boards, provinces and municipalities. Together they are responsible for water management, spatial planning and land use (OECD, 2014).

In order to deal with complex water challenges, opening up to cooperation with partners could be an option once the relevant parties realise that there is mutual dependency. Involving other players, and their challenges, could be a way to fulfil one's own goals. When one actor alone cannot solve a problem, multiple scales and sectors could be integrated in order to reach a set goal. Thus, collaboration between water managers, stakeholders and civil society can bring multi-faced projects to a satisfactory end and, an integration strategy with a calculated attitude can play an important role in this (Bressers and Lulofs, 2010).

Recent projects that were launched or co-operated by the water board 'Vechtstromen'[2] show an integrated and participatory style of management in which coupling plays a significant role. Connections between water-challenges and non-water-related matters and various challenges are made through coupling. Different agendas are connected to each other to create added value (Bressers et al., 2009). Emerging from the strategies that can be applied within water projects, the question becomes to what extent these coupling activities can be revealed to have changed the course of the project. The focus of this study will be a specific water board project, referred to as the case-study 'Kristalbad'; it is a multi-actor project in which the water board collaborated with the province, municipalities, the government service for land and water management (DLG) and a nature conservation organisation.

[1] A water board is a decentralised public authority, operating in an allocated area. The water board is a governmental water authority in the Netherlands that dedicates its work on the regulation and control of the water balance. The duties of a water authority include the care of the weirs, water quantity and water quality management.

[2] Water board Vechtstromen was established in 2013 by merging the two water boards Veld & Vecht and Regge & Dinkel, due to regional reorganisations.

1.2 Problem statement

The water board is taking initiatives and cooperating with other (public) organisations in order to reach its goals regarding water safety, purifying wastewater and to ensure sufficient water. Within the Kristalbad project, the water board Vechtstromen was not able to finalise a water retention project by only focussing on this one core task. Therefore, the water board linked objectives of other actors to this project, as a close collaboration with other stakeholders was needed in order to realise its primary goal.

Here, the question is raised what happened within the process of the Kristalbad project that eventually made the project into a 'success' and: what were the tipping points? The position that an actor takes within multi-actor projects is bound to the presence of different motives, a variety of matters at stake, agendas of the other stakeholders, the time span and the available resources. In what way were linkages created between the involved governmental institutions, and in what way were these linkages maintained and influenced by involved actors?

The goal of studying the Kristalbad project is to apply the theoretical concepts of coupling strategies and boundary spanning to a concrete, realised project. How did the actors interact during the course of the project and to what extent can coupling be recognised within this case? By employing the concept of boundary spanning, the focus is put on pioneering coupling strategies within the reconstruction of the project. The intention is to study where in the interaction process coupling took place and to see whether altered boundary judgements affected the course of the project. As the Kristalbad project took almost two decades to be finalised – counting from the initial plans – it makes for an interesting case to study.

1.3 Research objectives

This Master thesis for Public Administration at the University of Twente will be written with water board Vechtstromen as commissioner. The Department of Governance and Technology for Sustainability (BMS-CSTM) from the University of Twente has strong ties with the water board and can therefore be seen as an important link. The project context as defined by the commissioner is the intention to increase efficiency, public support and participation for future multi-actor projects that will be initiated by them, or executed in collaboration with them. The research object within this study is the Kristalbad project. The general research objective is the commissioner's request:

- To realise a reconstruction of the process of the Kristalbad project, including an impression of tipping points and the involved stakeholders, in order to reflect on the project.

The Kristalbad project will be studied as a single case study, which will lead to statements and findings that will be specifically related to this case only. What is done in the study, and for what purpose, is explained in the specific research objectives:

- To define the specific setting and backgrounds of the Kristalbad project
- To examine, over time, the interactions among the involved actors
- To reveal decisive moments within the process, regarding boundaries of the actors
- To explain the course of the process by relating it to boundary spanning strategies

These objectives are feasible and can be achieved within the expected timeframe and with the available resources. Through examining the role of boundaries within the Kristalbad project the difficulties and opportunities of boundary spanning strategies will be touched upon. In order to avoid an overly extensive research project, the study will be demarcated as an ex-post reconstruction of the interaction processes of the Kristalbad project. It will focus on coupling strategies that were employed during the preparatory phase of the project. The area management will be left out.

1.4 The purpose of the study

The purpose of this research is twofold. Firstly, it will be a reconstruction of the process of the Kristalbad project, wherein the specific context and the involved actors will be described and the perceived interaction processes within the Kristalbad project will be mapped. The reconstruction of the project will be accomplished by using the contextual interaction theory (Bressers and Lulofs, 2010). Secondly, this study will assess what effect the boundary spanning strategies had on the course of the project. The aim is to elaborate on the boundary judgements of the involved actors to gauge to what extent these coupling strategies contributed to the process.

Additionally, an interactive session was organised with project leaders of the water board, to reflect on this theoretical study of the Kristalbad. In this session practical suggestions were made on the course of the project, and the key points that could be of value for future projects were underlined. In an additional annex to this thesis the reflections on the ‘project leaders’ session’ are presented to the commissioner. Herein, further recommendations will be given to the water board regarding the lessons learned from this case study. By presenting the academic findings within a more practical session and in a comprehensible way, a practitioner’s perspective will be applied.

1.5 Research questions

The Kristalbad project can be regarded as complex; it is set within multiple sectors and scales and had a sizeable time horizon. Herein, the characteristics of the actors are assumed to have had an influence on the interaction within the process. Linking, coupling and spanning across boundaries are strategies that are being used by actors in order to achieve their objectives (Warner, 2016). Strategies that are used by actors are not necessarily precise and deliberate. De Boer and Bressers (2011: 89) state that developments within an interaction process can be irregular consequences of a magnitude of factors and circumstances. There are different types of coupling strategies with diverse intensities, but how did the coupling activities within the Kristalbad project affect the course of the process? This question lead to a case study with the following central research question:

What were the boundary spanning activities within the Kristalbad project that influenced the course of the process?

Boundary spanning activities imply an active and strategic behaviour of finding new ways to integrate boundary judgements between competing actors and their interests through boundary spanning. Boundary spanning is done by passing dividing lines between (socially) indicated domain, where an actor links sectors, scales and timeframes to previously independent other sectors, scales and timeframes (Bressers and Lulofs, 2010). In order to elaborate on whether boundary-spanning activities changed the course of the process, we must analyse the undertaken boundary spanning activities in terms of interaction between actors. In order to satisfactorily answer the research question, the interaction processes need to be described and analysed.

The Contextual Interaction Theory (CIT) will be used to provide an analysis of the interaction process. The CIT will function as a framework to investigate the project process of the Kristalbad. Herein, the focus is on the involved actors, with their characteristics that influence the interaction process. As the research will be a case study, multiple points of view will be taken into account, diverse methods will be used and the project will be studied in depth. Subsequently, an overview of the project process will be given, in order to fully explain the specific context and the stakeholders. The central focus of the research is how boundary-spanning activities could be understood, and how the activities affected the project's process.

In order to interpret the process of the Kristalbad project and to accomplish the research objective, the following sub questions should be answered to acquire the information fundamental to answering the central research question:

Sub- RQ1. What was the specific context of the Kristalbad project?

The specific context is a concept used in the CIT, which is based on previous decisions and specific circumstances of a case (Bressers and Lulofs, 2010: 24). This sub question will allow us to set the scene, whilst focusing on the specific context as input for the interaction processes.

Sub-RQ2. What were, over time, the cognitions, motivations and resources of the actors involved within the Kristalbad project?

In order to be able to say more about the involved actors, it is necessary to focus on the relevant moments of interaction. In this sense, the sub-question could be considered an in depth analysis of selected interaction processes in which the motivations, cognitions and resources of the actors will be described. It will also take the time horizon into account. How did the core characteristics develop over time within the project process? In the Contextual Interaction Theory the core characteristics are used for description and analysis. As the core characteristics are closely related to each other, they can have a mutual influence on each other. Additionally, they are related to the interaction process. This sub-question will focus on the motivations of the different actors, their cognitions and the involved resources and power divisions within the analysed interaction processes.

Sub-RQ3. What was the role of boundary judgements within the process?

Boundary judgements are, in the CIT, considered to form part of the cognitions of an actor and play an important role in complex interaction processes (Bressers and Lulofs, 2010: 17). The way an actor perceives boundaries might explain their chosen position within a collaboration, and provides insight in the flexibility and adaptation of the boundary judgements. With this sub question the three dimensions for the analysis of boundaries judgements will be applied (i.e. sector, scale and time). Furthermore, focus will be put on how, within the consecutive interaction processes, the boundary judgements of the actors' transformed. The altered boundary judgements will be observed and the boundary spanning activities within the processes of the Kristalbad project will be analysed.

1.6 Theoretical framework

1.6.1 Conceptual theory: coupling strategies, boundary judgements and boundary spanning

There are different paradigms and views on water governance that can be used to explain the renewed form of management. Examples are 'Interactive Water Management' (IWM), Integrated Water Resource Management (IWRM) and 'Adaptive Water Management' (AWM) (Pahl-Wostl et al., 2007: Huitema et al., 2006: Lulofs and Bressers, 2010). With IWM a new sort of internal integration was created; previously, hardly connected, fragmented water management tasks got coordinated and linked by water managers. Interactive Water Resource Management can be seen as the successor of Integrated Water Management. With IWRM the scope was broadened and focus was put on the connection with other sectors of society. With this view on other sectors' activities and policies, the conceived relationship between other sectors and the existence of water problems – or the possibility of other sectors to think up a solution for these problems – lead to a more external integration of water management (Lulofs and Bressers, 2010: 6). Where IWM was more focused on coupling the core tasks of water management, IWRM opened the doors to other sectors, which lead to more complexity (Lulofs and Bressers, 2010: 6). IWRM had a strong ecological emphasis and focussed on the necessity of considering all aspects and all functions of water (Mostert, 2006).

Coordination and cooperation with actors from different policy domains proves to be complex; tasks and ambitions – but at the same time characteristics – might differ. Although a project may appear sound, actors can have a preference for different phasing (in time) and there could be different perspectives on a problem or less flexibility than required (Lulofs and Bressers, 2010: 7). This is the niche in which Adaptive Water Management (AWM) emerged. The AWM theorem is based on systematic strategies for improving management policies and practices by linking it to short-term and long-term opportunities that emerge from the dynamics within the water sector, but within different sectors as well. The aim of this vision is to increase the adaptive capacity of the water system, which implies a changed attitude towards time horizons and strategies. Herein, coupling strategies can be found, where water managers find new ways of connecting their challenges to other actors' necessities or demands (Pahl-Wostl et al., 2007: 4).

Modern water management can be characterised by 'boundary spanning' (Bressers and Lulofs, 2010). When there is an attempt to include other societal purposes in water projects (nature development, recreation, landscape etc.) and the aim is to create synergies, various sets of actors and rules have to be combined (Coenen and Bressers, 2012: 48). Alongside the multiple goals that can be pursued, this creates potential for combining resources and collecting multiple dividends, which can make the synergy more beneficial. Where the possibility arises that actors cooperate, the question regarding boundary judgements of the involved actors can be raised (Coenen and Bressers, 2012: 48).

Will the actors have a similar – or matching – set of issues and how will rules and boundaries regarding the project be accommodated? Additionally: what is the role of external policies on this interaction, such as the National Water Policy and the European Water Framework Directive (Mostert, 2006)? If boundary spanning is a good example of modern water management, to what extent can this strategy by observed within a multi-actor project such as the Kristalbad?

Coupling strategies

In densely populated countries like the Netherlands, space is an important asset. By broadening the amount of purposes within a single project, new resources are opened but new actors, rules and requirements are also to be included in the decision-making processes. This adds to complexity. When an organisation does not have the needed resources or a certain project does not progress, coupling can be a useful instrument to realise a project. It can as well be utilised in order to create more (public) support for the project, to minimalize the costs, to share the risks or to work on better relations with partners (Bressers et al., 2009). Coupling refers to the process of creating – or avoiding – linkages between water managers and other actors, where cooperation is regarded important (Huitema et al., 2006). These linkages can be personal or organisational, and relate to the timing and content of policies and procedures. The Huitema et al. (2006) claim that coupling does not occur in a stable environment. There should be a need to create linkages, which is mostly done in a setting were other actors are also engaged in coupling work. In order to create a fruitful coupling, awareness and responsiveness is important, as perceptions of strategies amongst actors may differ (Huitema et al., 2006: 34). In order to provide strong ties, activities have to be undertaken to arrive at a level where collaboration becomes likely. Once linkages are made they are to be maintained and steered towards a desired direction (Warner et al., 2010). What takes place then can be included under the heading of coupling strategies.

Boundary judgements

Boundaries can be seen as constructed delineations between different actors and their domains. The boundaries (issues, actors, rules of actions) are explicitly or implicitly specified by a common agreement of the actors. It is thus likely that there will be change over time (De Boer and Bressers, 2011: 60-61). In accordance to Bressers and Lulofs (2010) within this study we assume that boundary judgements play an important role in complex interaction processes, as they form a part of the cognitive system of the actor (Bressers and Lulofs, 2010: 18). This facilitates filtering out what observations of social phenomena are within (relevant) or outside (irrelevant) an actor's policy sector or sub- domain (Bressers, 2009). Three main dimensions that can be used to delineate the boundaries

of the domain are the sector dimension, the scale dimension and the temporal dimension (Lulofs and Bressers, 2010: 12). Included in the sector dimension are aspects, such as actors, resources and policies. The scale dimensions include the geographical scale and the administrative level that can be approached (e.g., Supranational, National, Regional, Local). The temporal dimension encompasses timing, time horizon, and time pressure (Lulofs and Bressers, 2010).

When boundary judgements differ amongst actors they can cause incoherence within a project. If they are too narrow, adaptive water management will not be effective. When boundary judgements are too wide, complexity becomes difficult, which might lead to the stagnation of a process. Boundary judgements should be sufficiently similar and sufficiently flexible (Bressers and Lulofs, 2010). By influencing boundaries and by putting effort in creating a 'joint sphere', the domain interpretations amongst different actors can be bended or brought together (Bressers and Lulofs, 2010).

Boundary spanning

In order to accomplish multi-facetted goals, an organisation should learn how to cope with complexity, and boundary spanning could be the strategy to bring different stakeholders together. By using externally oriented strategies of spanning scales, times and sectors, the course of the process – but also its setting over the longer period – can be influenced (De Boer and Bressers, 2011). It is likely that vertical coupling will imply the reframing of issues, transforming them to a format that can be understood at each level. Framing work is expected to be an important aspect of successful coupling (Huitema et al., 2006). The creation of a boundary object which can be perceived from different points of view – in this case the Kristalbad project –, leads to the motivation for coupling (Huitema et al., 2006: 37). The level of collaboration is indicated by the typology of 'spans', including their intensity, redundancy and reciprocity (Huitema et al., 2006: 18).

What characterises boundary spanning connecting problems to solutions and mobilising resources in the search for a successful outcome (Williams, 2002: 121). 'Boundary spanning' is a concept that is used in innovative management to refer to individuals or organisations that link their internal networks to external sources of information. In this context, the strategy of the boundary spanner and the characteristics of the specific context and involved actors are influential as well. Boundary spanning is an adaptive and connective form of management that is mostly used as a multidimensional strategy by actors in complex situations (Warner, 2016). In this thesis, boundary spanning will be defined as an adaptive governance activity, wherein encountered challenges are confronted by linking different – and previously independent – sectors, scales and timeframes to each other (Lulofs and Bressers, 2010: 11). There are different ways of influencing boundaries, for example

buffering boundaries, bringing up boundaries, and spanning boundaries. Different dimensions can be used to explain the domains, such as sector-, scale- and temporal dimensions (Lulofs and Bressers 2010: 11).

Warner (2016) claims that in a complex adaptive environment, such as the water sector, boundary spanning nearly became a system requirement, whilst mono-sectoral approaches became out-dated. Incentives for collaboration were joint benefits, mutual influence and synergy. Within the spanning, the timing and the degree of spanning are of utmost importance. This can involve the highlighting of certain topics, or establishing links of issue areas and different policy chessboards. Boundary spanning can be used as a tool to establish strategic linkages with adjacent agendas, actors and arenas (Warner, 2016). In order to do so, however, a certain degree of receptivity that accommodates the spanning is required.

1.6.2 Contextual Interaction Theory

Within complex processes a governmental institution has to be acquainted with how multi-actor processes can be handled. Projects where actors of all levels – with all different kinds of problem perceptions, instruments and resources – are brought together are characteristic examples of governance instead of government. A wide range of frameworks can be used to explain how, when and why interaction processes take place.

In order to give an overview of the setting of the Kristalbad project and to study the collaboration of the involved actors, the Contextual Interaction Theory proved highly relevant.[3] The Contextual Interaction Theory (CIT) can be used concerning the implementation of policy and its process (Bressers, 2004: pp. 284-318). Additionally, it can be applied as a policy analysis model in which collaborative governance projects can be analysed in order to get an oversight of the process (Bressers, 2004). The Contextual Interaction Theory functions as a layered explanation of social processes, emphasizing the actors' characteristics and the interaction among the actors (Bressers, 2009). Alongside the specific context, there is a broader and wider governance context that can be seen in the CIT model as overlapping entities that influence the interaction processes (see Figure 2). Reducing the features of the actors' to three core characteristics creates an understanding of the interaction processes based on: cognitions, motivations and resources.

[3] Another conceptual framework for social learning in resources management was created by Pahl-Wostl et al. (2007: 11). This framework has similarities to the CIT model, but is less specific on the mutual relations of the actors and the influence of the wider contexts.

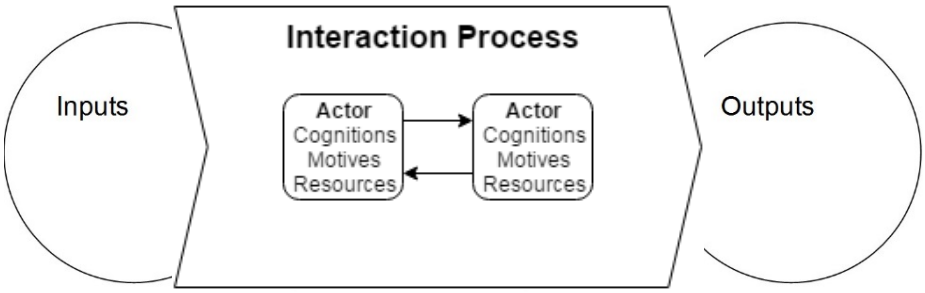


Figure 1 Contextual Interaction Theory input/output

Within an interaction process between two or more actors, actions are influenced by core characteristics. At the same time, the interaction process is influenced by inputs from the specific context and other contexts (Bressers, 2007). The Contextual Interaction Theory states that in an interaction process, specific inputs are "processed" by interactions of actors, into outputs. The CIT can broadly be summarised in that the course and outcomes of a process do not only depend on the inputs, but on the interplay of the core characteristics of the actors involved in the interaction process, as well (Bressers and O'Toole Jr, 2005).

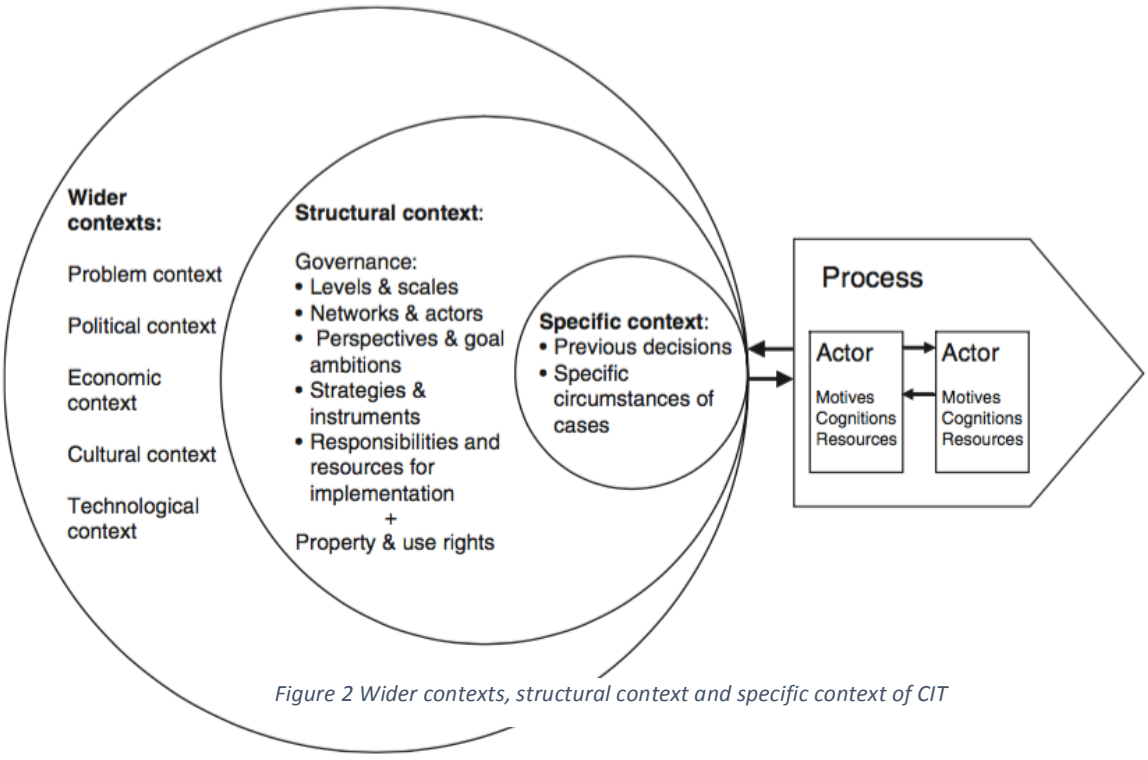


Figure 2 Wider contexts, structural context and specific context of CIT

1.6.3 The CIT applied within this study

The process of the Kristalbad project can be explained using the CIT framework by focussing on the core characteristics of the actors. Nevertheless, attention must be paid to how the context influenced the actors' key characteristics, as the specific case context has an impact on the interaction processes as well. The reason why the CIT model was chosen as the theoretical framework for this study is that it

can be used in a descriptive way as it provides the specific context of the Kristalbad. At the same time, it can be used as an analytical tool to study the characteristics of the actors. As this research is an ex-post analysis of the finalised Kristalbad project, the Contextual Interaction Theory is used to provide a better understanding of the circumstantial backgrounds and to produce an analysis of the involved actors in the interaction processes regarding their motivations, cognitions and resources (Bressers, 2004).

For this study only a selected part of the CIT model will be used, due to the relevance of the specific context and because of restrictions on the scope of the study. The interaction with the specific context, the structural context and the wider governance context will be not included in this research. The interaction processes of the Kristalbad will be mapped over a time dimension, which will give insight into the change of actors' characteristics over time. Accordingly, the research will have an analytical character; it will apply the CIT theory as a conceptual lens while reconstructing the process of the Kristalbad project.

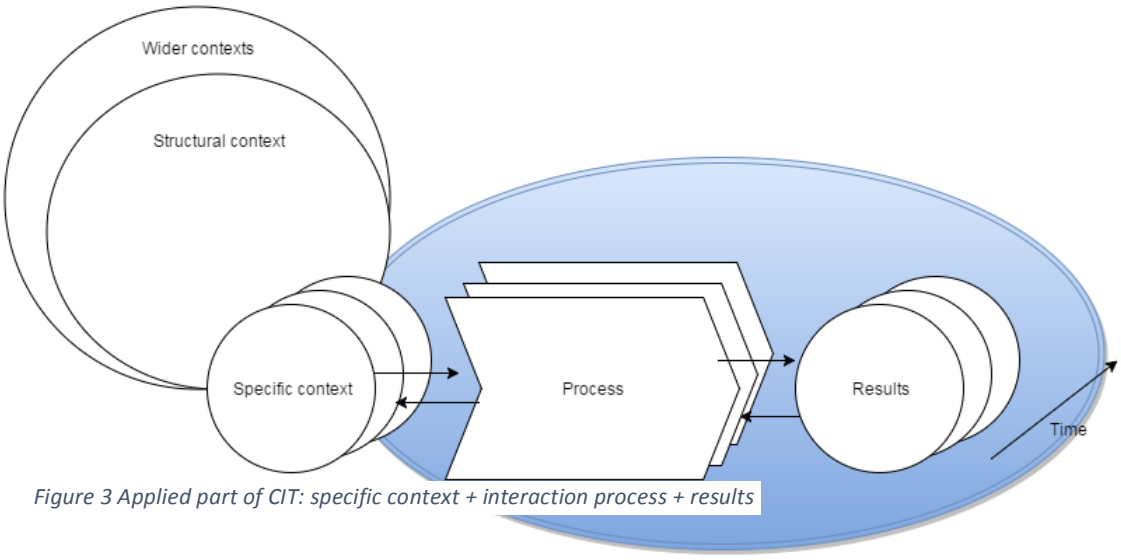


Figure 3 Applied part of CIT: specific context + interaction process + results

By using the CIT model to explore the interaction context and how actors relate to each other, a perspective is created that generates information regarding the planning and management (Jeffrey and Seaton, 2004). The CIT will provide a theoretical framework for the ex-post explanation of the project process, while simultaneously functioning as an instrument that describes the characteristics of the actors and circumstances in the project. The three key characteristics of the actors in the arena have proven to be of explanatory use in analysing the course and the results of the interaction processes. The Contextual Interaction Theory as theoretical framework will also facilitate the analysis of the role of boundary judgements, as the latter form part of the actors' cognitions (Bressers and Lulofs, 2010: 17). The basic assumptions of CIT will be used as an analysis tool to study the interaction processes of the Kristalbad project.

Chapter 2. Research strategy

2.1 Research framework

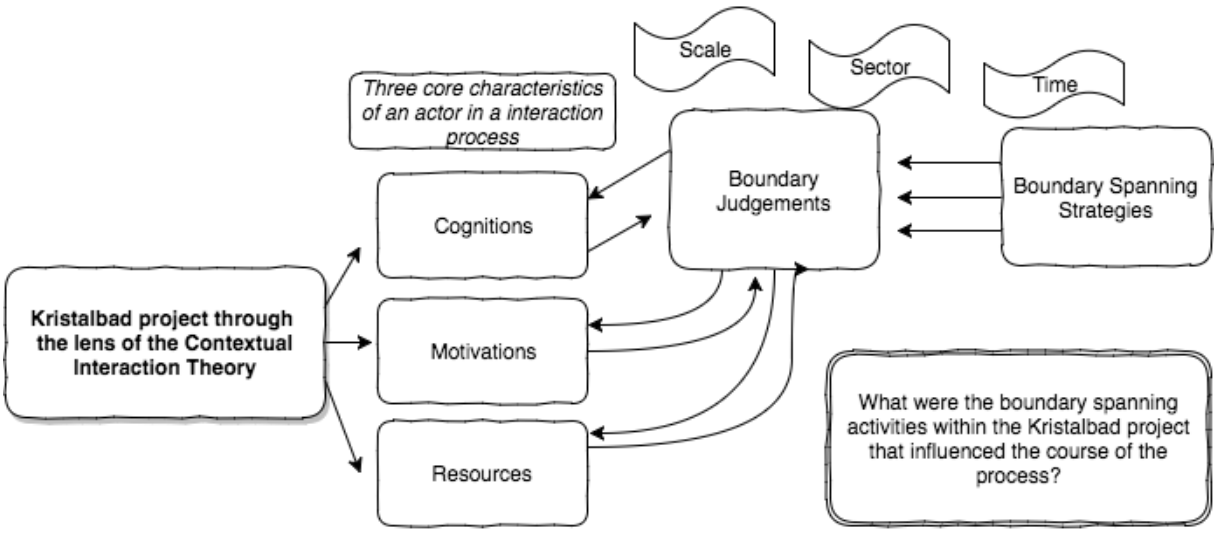


Figure 4 Overview of the core characteristics and the role of boundary judgements

In order to give a view of what the study contains, the research framework gives a broad impression of the intentions of the research and how the research objectives were achieved. The Kristalbad project was perceived through the lens of the Contextual Interaction Theory. Within the Kristalbad case study the interaction processes of the Kristalbad project could be considered the research domain and the research object. Findings will be based on this research project. Within the case study, the objects of focus were the interaction processes of the Kristalbad project; which actors were involved when and what were the tipping points within the interaction?

In these interaction processes focus was on the three core characteristics of the stakeholders. By defining the boundary judgements of the actors within the interaction processes, more information was gathered regarding the effective boundary spanning. Additionally, the overall receptivity of the actors was questioned, which gave insight into the flexibility of the actors and the domains. Nevertheless, this did not form part of the research area. Subsequently, the central question of the study (what the boundary spanning strategies were that influenced the course of the Kristalbad project) was answered.

2.2 Methodological approach

In order to answer the research question, the sub questions and to gather data, different types of data were retrieved. They consisted of different backgrounds. The central research question was split up in different smaller sub questions, in order to gather the information needed and accomplish the research objective. This paragraph provides an overview on which methods were used to answer the set of research questions.

2.2.1 Case study

This thesis opts for a thorough examination of a complex case. The research done towards this end consists of three different methods of data collection. The strategy that has the best fit in this kind of in depth research is a case study design, as case studies can provide a detailed contextual analysis of events and the essential relations. The objective of this study is to comprehend the process of the Kristalbad project and to involve the contextual conditions and core characteristics with the intention to explain the project's process through a theoretical framework. The case study provides the possibility to investigate the finalised project exhaustively and within its real-world context. In a case study, the contextual analysis and the relationships can be emphasised by combining different sources of evidence. The research question does not require control of the behavioural events, but is an ex-post evaluation of a (existing) study object. The study can be seen as a qualitative study with an actor-oriented approach, which is commonly used for a more interpretative or qualitative method of analysis. The study has a partially descriptive, and a partially explanatory character, as the research question imposes gauging what the boundary strategies were in the Kristalbad project. In order to answer the central research question, a reconstruction of the project and its activities are needed.

2.2.2 Academic literature

Firstly, a literature review was undertaken that developed the concepts that will be elaborated upon. It can be considered an abstract and exploratory setting of the scene, before diving into a more specific case study research on the Kristalbad project. Unobtrusive data was collected via a literature study of relevant resources. The Contextual Interaction Theory will be explored, as it will form the research perspective within the case study that analyses the Kristalbad project. Theory on coupling strategies, boundary judgements and boundary spanning will provide a theoretical underpinning for the formulated research questions. From this literature study, theoretical backgrounds were deduced and a conceptual model was formed.

2.2.3 Interviews

The research included data collected, via obtrusive measures, by interviewing water board employees and representatives of the involved actors in the Kristalbad project. Interviews were considered an important tool to reflect and verify stakeholders' perspectives on the project. Semi-structured interviews were conducted to create a wider set of response patterns. Loosely formulated, open questions offered the interviewee flexibility to elaborate on specific topics when desired. Open-ended questions were a logical choice, in order to comprehend how the respondents recalled the interaction and how they reflected on the project process. Direct feedback of interviewees presented insights and lead to a cyclic and iterative process of research adaptation. The interviews were recorded by making use of recording equipment. Transcripts of the interviews were generated and organised by the author of this study.

During the semi-structured interviews a timeline was established and the project process of the Kristalbad was discussed. The reason for conducting these interviews was to compare the real-life practice with the theoretical literature that had been studied. It worked in two ways: (i) theory was used as a lens to look at the Kristalbad project, simultaneously; (ii) the practical experiences fed back to the applied theory, which produced new insights to the theoretical framework.

2.2.4 Records and documents

Additionally, from the interviews insights were derived regarding where to look for valuable records and documents. For data collection, relevant reports and written (internal) documentation on the project was used in order to validate the material from the interviews. The project group, steering committee, the land re-ordering committee and other significant consultations 'produced' documents that gave a neutral overview of and better insight in the process. These documents were made available through the water board's facilities and archives that could be used by the researcher. These documents, such as the action plan and financial agreements, were key elements in the reconstruction of the project. The documents can be considered primary resources, as they are the original source of information surrounding the topic. By combining the information from interviews with written records, results on the characteristics in the interaction processes were produced.

2.3 Operationalisation

2.3.1 Delineation

In this study, the 'real' situation will be investigated through interviews, which will be tested against the theoretical concepts. Through this investigation, the project process and some of its components will be explained. This research deals with phenomena that will not be considered general or quantifiable variables. In the light of theory – and the created conceptual model – relationships will be studied within one case study only (Argyris and Schön, 1996: 41). The aspects that are revealed through this research can be of further use for practitioners within the water board or for project managers (Argyris and Schön, 1996). They can learn from the examined experiences described in this thesis.

2.3.2 Operationalisation of concepts

The various parties involved in the Kristalbad project will be referred to as 'actors' or 'stakeholders'. Though the word actor tends to refer to participants in an action or process, and stakeholder more so to a person (organisations or parts of organisations) involved in a certain matter (or affected by a course of action) and having responsibilities towards and an interest in its success, there is no major difference in the usage of these concepts. In practice they will be used synonymously.

For the purpose of this research, coupling strategies will be defined as the process of creating – or avoiding – linkages between water managers and other actors, where cooperation is considered to be important (Huitema et al., 2006).

Boundary spanning will be used to refer to individuals or organisations that link their internal networks to external sources of information. In this thesis, boundary spanning will be defined as an adaptive governance activity performed by water managers in which encountered challenges are confronted by linking different – and previously independent – sectors, scales and timeframes to each other (Lulofs and Bressers, 2010: 11).

The characteristics of actors in the interaction processes can be considered to be the stimulating factors within the arena. In order to be able to define the limits of these concepts, the three core characteristics will be described individually (Bressers and Lulofs, 2010):

- *Cognitions* can be operationalised as the way the different actors perceive the Kristalbad project and what their boundaries are. It is including the way in which an actor would describe his/her own role within the project and interpretations of their goals.
- *Motivations* can be defined as the leading goals and values of an actor within the Kristalbad project. This includes the intrinsic motives of and/or pressures for actors to participate within this project.

- *Resources* can be operationalised as the available and accessible assets of the actors. This includes the financial aspects, the divisions of tasks and the attribution within the project group.

The concept of boundaries will be used as constructed delineations between different actors and their domains. Different dimensions - such as sectoral, scale and temporal dimensions - can be used to explain the domain (Bressers and Lulofs, 2010: 11). Boundary judgements are the sometimes implicit notions of what (does not) belong(s) to the issues at stake (De Boer and Bressers, 2011: 70).

2.4 Validity and reliability

2.4.1 Validity

In order to take the validity into account during this study, multiple and different sources of data were used. With triangulation, a combination of multiple research methods was used within the research to study the same concepts. In this way, a validation of data through cross verification from two or more sources will be facilitated. By bringing data obtained through interviews, literature review and written primary sources together, a triangulation of sources will be applied. By applying various research techniques at the same time, a one sided vision on the case study could confidently be avoided.

2.4.2 Reliability

Reliability was paid attention to through indicating clearly which theory had been used for the descriptive part of the study and by showing that the data collection procedures can be checked or repeated; the interviews will be audiotaped and summarised in accordance with the interviewees. The summaries of the interviews will be made available on request, in order to provide better insight in the data that was collected for the thesis when needed. During the interviews the same questions were posed to different interviewees – and to more than one representative of each actor organisation – to collect a comprehensive overview and to check for discontinuities. When there are unclear concepts or ideas, these will be pointed out by the researcher during the interview in order to provide a clear view.

2.4.3 Role of the researcher

The role of the researcher within the research needed to be paid attention to, as a broad practitioner's view needed to be avoided to study the case from an academic perspective (Argyris and Schön, 1996: 37). In order to secure the academic view, the subjects were interviewed and their responses were carefully observed. The theoretical framework used functioned as an explanatory model to account for the retrieved data, in which redefining topics was an iterative process. The purpose of this research

was to use water management theory within a case study, in order to explain the project process. In the ex-post analysis, a reconstruction of the project process was made. However, it could be considered research based on academic literature, connected to the data collected from the practitioner's role. In this research, figures are used to illustrate the creative thought process and in order to clarify the relationship of the different concepts. Though the research objective originates from the water board, the focus within the interviews was not to be on the side of the water board, but to focus on the individual stakeholder's perceptions of the Kristalbad project process. With their input, the interaction processes could be reconstructed.

2.4.4 Research liability

As the Kristalbad project started more than a decade ago, during the interviews – and by analysing the gathered data – attention was paid to a possible 'coloured' perception; the interviewees were looking back to the project, but might have been more positive knowing that the project was finalised successfully. A risk of retrospective interviews is that memories could be 'slightly changed' in order to fit into the current perspective on the project, or to resemble the (ex post) created view on the project.

Additionally, the personal touch that memories might have, as well as personality and personal interpretations of the explicit events or crucial moments, were taken into account. In order to ensure the trustworthiness of the reconstructed interaction processes and experiences, a general timeline was established during the interview as stepping stones.

Within this single-case study an ample base of data was consulted. The domain in which the study's findings can be generalised will be relatively small. Human judgement should always be questioned, though the aim is to rely, by triangulation, on the various sources.

Chapter 3. Specific context: processes and coupling

3.1 Introduction

In this chapter an introduction will be given to the history of the Kristalbad project, in order to establish - and get acquainted with - the project and its time span. An overview will be offered spanning the entirety of the Kristalbad project, including its preliminary and concluding phases. In order to adhere to the Contextual Interaction Theory, this chapter will follow the framework closely. Firstly will be zoomed in on the specific context on the input side, in pursuance of determining the geographical setting and the developments of the project. By outlining the geographical settings and the history of the land re-ordering plans, in-depth information on the backgrounds of the project will be provided, which is important for the sub processes of the Kristalbad project. The following question will be answered throughout this chapter:

Sub RQ1: What was the specific context of the Kristalbad project?

This sub question will allow us to set the scene, whilst focusing on the specific context as input for the interaction processes. Descriptive information is needed, in order to define the object of research and to obtain explanatory insights. The actors that were involved in this preliminary phase will be mentioned and the at that time applicable policy will be clarified by creating an overview. In this way the specific context of the project will be described, which will give further insight in the process regarding the coupling activities that can be grasped. Firstly, the geographical setting of the project area will be explicated, before expatiating on the history of the project.

3.2 Geographical setting

The project area

The cities of Enschede and Hengelo have experienced in recent decades strong growth. Urban zones and industrial sites were gradually spread out over the landscape. Enschede-West covers a nature zone, where the two lee areas Twekkelo (South) and Driene (North) are almost connected to each other. The urban fringes, both on the side of Enschede as on the side of Hengelo, have been expanding over the years (Bosch Slabbers & Arcadis, 2006). When looking at a map, the cities appeared to practically grow towards each other and were nearly connected (see Fig. 5). The Kristalbad project formed part of the redevelopment of the Enschede North area, wherein developing the multifunctional land between the cities of Enschede and Hengelo was key. The project area of the Kristalbad is situated where the urban zoning and industrial sites of Enschede and Hengelo approach each other the closest. The area consisted of scattered lots and did not serve a shared function, but was mainly used for agricultural purposes.

The Kristalbad project exists of an area of about 40 hectares between the two cities (see Fig. 5). The zone of the Kristalbad project was partially owned by the water board Regge & Dinkel (14 hectares), by the municipality of Enschede (14 hectares) and the rest of the 40 hectares were mostly owned by private owners. The area around the project is densely populated, inhabited by about 400.000 people, and there is a scarcity of open space.

Three lines intersect the zone: on the North side there is a main road between the two cities: the Enschedesestraat on the South side is the Twente shipping canal and in the middle the area is a railroad between Enschede and Hengelo (see Fig. 5). The infrastructure lines were putting pressure on the nature zone, as they were hindrances between the connection of the Northern and Southern nature zones.

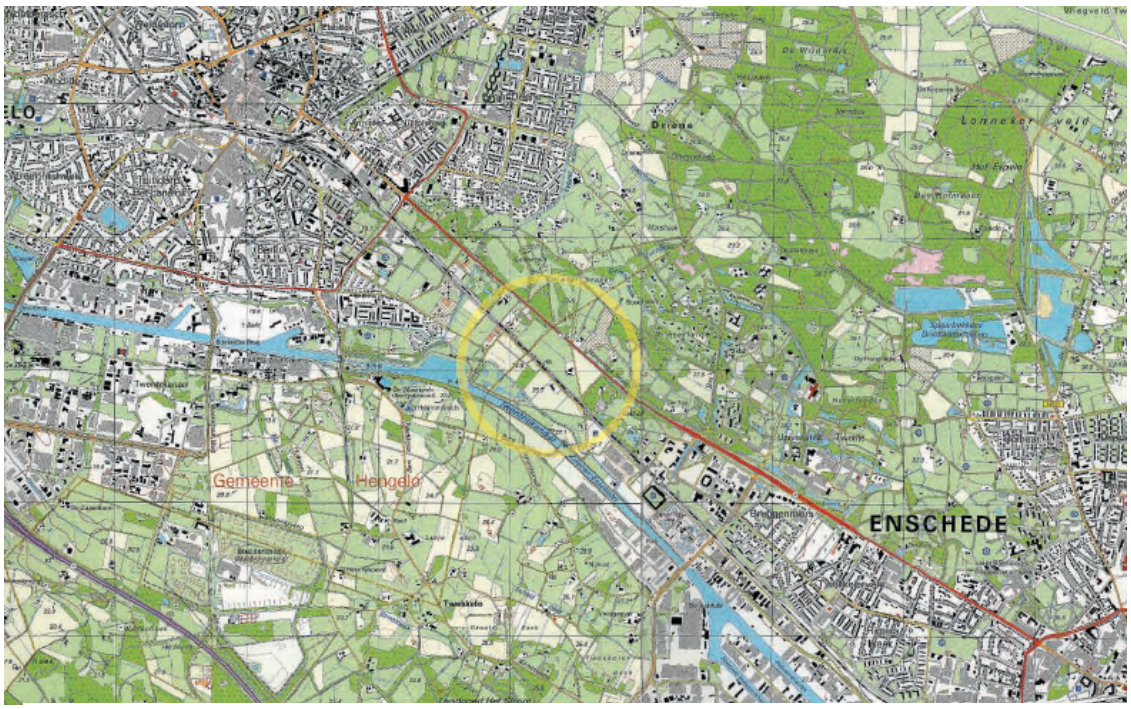


Figure 2 A map of the intermediate area between the cities of Hengelo (up left) and Enschede (down right). The Kristalbad project was situated in the area that is marked with a yellow circle.

Difference in altitude

The city of Enschede is partially located on a moraine, but the city of Henglo is situated on a lower surface (see Fig. 6). As there is quite a difference in elevation between the cities, storm water would run from Enschede to Hengelo during heavy rainfall. Due to many paved surfaces, a lot of storm water ended up in the sewerage, which led to fast and huge discharges during heavy rain. The mixed sewer system of Enschede was not designed to deal with extreme amounts of water in such a short time, nor could the downstream brooks cope with the abundance of water.

Sewage Treatment Plant

In Enschede West there is a sewage treatment plant located close to the industrial sites and port area (see Fig. 6). Sewage systems include storm water runoff or urban runoff, and are generally capable of handling a limited amount of storm water. Due to heavy rainfall, the situation may arise where the sewage treatment plant cannot handle the amount of water that is coming in. Precipitation causes widely varying flows, which reduces the efficiency of the sewage treatment plant and can cause wet weather overflows. An overflow has the purpose of discharging excess sewage from the combined sewer (sanitary sewer and storm water) to the surface water. It is an emergency valve, to avoid that urban areas are flooded (i.e. basements, buildings, roads) and to avoid that wastewater produces health risks (Interview).

The Elsbeek Brook

In Hengelo three streams come together; the Elsbeek, Berflobeek and the Drienerbeek. Right through the Kristaldbad project area runs the Elsbeek brook, which drains water quickly in north-western direction. The Elsbeek brook originates from the sewage treatment plant (STP) in Enschede West, which provides a 100% of effluent at the source. In the point where the three rivers cross, the water has the name Berflobeek and runs downwards to the Bornsebeek. The Berflobeek is filled with effluent from the sewage treatment plant in Enschede West (Waterplan Hengelo). The brooks functioned as the discharge of wastewater from Enschede and Hengelo and mainly contained urban water. When the sewage is full, the overflow discharges the excess water on the surface water. In this event, untreated sewage can be discharged into the surface water, prior to reaching the sewage treatment facilities, in which the overflow can cause mal-odour. During heavy precipitation, the sewage treatment plant in Enschede would have an overflow, which would pass the water through the Elsbeek on to lower areas.

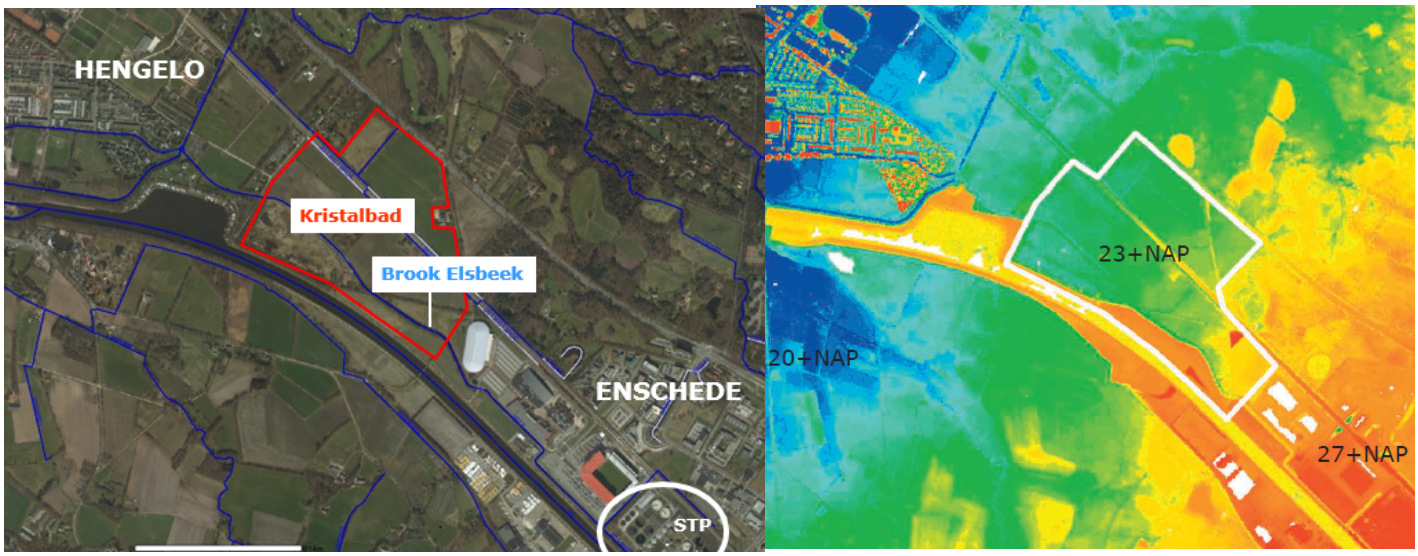


Figure 3 Maps of Kristalbad: showing the Elsbeek Brook and the Sewage Treatment Plant (left) and illustrating the difference in altitude (right)

3.3 History of the water plans on the brooks

In the fifties research was done to determine which measures needed be taken to limit the risk of inundations in Hengelo. In the context of the Hengelo water plan was chosen for a storage pond. The function of this pond was flattening the discharges due to the paved surface of Enschede, in order to reduce the risk of inundations in Hengelo (Startnotitie bestuurlijk overleg, 1997). Years after the water plan design in the fifties; a number of developments increased the risk of inundations in Hengelo again. Further expansion of paved surface in Enschede and plans of the water board to close some sewage treatment plants (STP) in Enschede increased the amount of water that needed to be disposed.

To provide a certain safety level in Hengelo – whilst keeping a controlled discharge of water to the Twente canal – the amount of water storage needed to increase. Theoretically, this could be done by expanding the brooks within Hengelo, but as this was undesirable and practically impossible, the chosen alternative was to increase the storage capability of the Kristalbad (Startnotitie bestuurlijk overleg, 1997). For the expansion of the Kristalbad, was reasoned that the downstream city of Hengelo must not hinder upper stream water drainage from the city of Enschede. But a certain responsibility for Enschede to reduce the inconvenience could not be denied either, so the two municipalities agreed on finding a common solution. Thereof, the location of the initial pond on partly Hengelo's and partly Enschede's territory was the result, and further developments should be done equally.

Looking for a suitable solution

To meet the wishes of the municipality of Hengelo to reduce the overflow of effluent on the Berflobeek brook, one of the options was to increase the storing capacity of the Kristalbad pond (up to 20 hectares). In the preliminary phase of determining the size of the storage pond, the effects on the intermediate area between Hengelo and Enschede were not yet taken into account by the water board. With the scheduled expansion of the STP in Enschede-West, improvement of the quality of the effluent was forthcoming, which created a possibility to redefine the Kristalbad zone. Because of the relation of this plan to the development of the intermediate area between Hengelo and Enschede, further consultation with the two municipalities needed to take place (Startnotitie bestuurlijk overleg, 1997).

Reducing the overflow to the Twente canal

In protection of the quality of potable water, a discharge of effluent and overflow water to Twentekanaal was accepted once every 10 years (Natte Structuurschets Hengelo-Enschede, 1992). For

an overflow frequency of once every 10 years, the water board initially required a storage capability of at least 131,000 m3 (Startnotitie bestuurlijk overleg, 1997). This volume could have been realised by extending the storage pond Kristalbad to the lots that at that time already were owned by the water board. Nevertheless, more accurate calculations of the sewerage system of Enschede, showed that more storage was needed to reduce the overflow frequency to once every 10 years. Additionally, as stated by the 21st century Water management Committee, extra water retention was required in order to store the increase of storm water due to climate change. Therefore, a necessary storage volume of 187,000 m3 was needed.

Toward agglomeration

For more than two decades plans have been proposed by the provincial government and local municipalities to give the area between the cities of Enschede and Hengelo an useful purpose. In the 1960s arose the idea to merge the cities of Enschede, Hengelo and parts of Borne. Given the persistent pressure of urbanisation and the limited spatial opportunities around Enschede and Hengelo, it was desirable to create opportunities in the intermediate zone for urban functions. It was envisioned as one connected urban area in the region of Twente, which would strengthen the regional governance function of the provinces and improve their economic position. Over the years, multiple plans were made and diverse names were opted (i.e., Stedenband, Dubbelstad, Twentestad), but the merger never occurred, because of limited funding from the central government and opposing inhabitants. After the project had been cancelled in 2000, the cities decided to withdraw the plans of a fusion, but intensified their cooperation as 'Netwerkstad Twente' instead.

In the years after the merge plans, the involved municipalities proposed to redesign the area and change the zone into a natural site with recreation possibilities. The province of Overijssel had thought of the zone as ecological corridor, where the water board Regge & Dinkel planned on creating water retention. This diversity of requirements called for a joined approach with a focus on synergy. With the approaching transformation of the area and the land re-ordering committee Enschede North, the different actors involved in this area assembled and exchanged their objectives. In the next paragraphs the policy backgrounds and the role of the land re-ordering committee will be illustrated.

Municipalities interacting

Since the 1990s the cities of Enschede and Hengelo have been thinking about the use of the intermediate area, and there is a long history on the formulation of a destination plan for the zone. Different initiatives among the municipalities were undertaken, and the multiple sources indicate that the municipalities showed changing cognitions over time due to external circumstances. As

Twentestad would not be realised, and the development of the Twente airport was stagnated, the perspectives on the intermediate area slightly changed. As a first step, in order to decide what to do regarding the spatial development of the intermediate area of Enschede and Hengelo, a vision was developed in 2002. This vision was expatiated in the "Direction Intermediate Area Enschede-Hengelo" (Koers Middengebied Enschede-Hengelo), July 2002. This document was deliberated in the council of Hengelo, that agreed on the headlines, but indicated that further insight into the ecological corridor had to be obtained before the plans could be established (Raadsvergadering Hengelo, 2006). Around that time, the municipality of Enschede was deciding on the destination plan for the 'canal zone' (Kanaalzone). There was an Environmental and Safety Impact Assessment (Voorstel Gemeenteraad Enschede, 2002) conducted, in response to the request of the football stadium to expand. This report analysed environmental and safety impacts that could occur as a result of the implementation of various initiatives. The given guidelines were on safety of large numbers of visitors of the football stadium and the ecological developments in the area plus the extent to which it was possible to combine these with recreational and hydrological functions (Voorstel Gemeenteraad Enschede, 2002).

To see whether an ecological corridor in the middle area between Enschede and Hengelo would be possible, and to determine the conditions for other functions of this area, agency Grontmij conducted in joint command of the municipalities of Enschede and Hengelo an investigation on the exact content of the ecological corridor. The study included the potential ecological values of the intermediate area. Much attention was given to the intersection of the zone with the present infrastructure, the consequences of the possible new infrastructure and alternatives for the traffic access. The findings were written down in the report "Ecological corridor Twekkelo-Driene" and in the supplementary note "Outline Eco zone" (Raadsvergadering Hengelo, 2006). In accordance with the municipality of Hengelo and water board Regge & Dinkel, was decided to work together on the preparations and the realisation of the Eco zone (Voorstel Gemeenteraad Enschede, 2007).

3.4 Policy backgrounds

Adopting the vision of WB21: resilient water and adapting to climate change

In August 2000, the 21st century Water management Committee (Commissie Water Beheer 21e eeuw) issued its vision on the future of water policy in the Netherlands. According to the report of the committee, water systems needed to be resilient, water needed more space, and an increase of precipitation should be absorbed. The amount of precipitation and the intensity of precipitation will increase due to climate change. For urban areas, the increase in rainfall intensity will be the most important factor to consider. This would directly influence the policy of water boards within the

Netherlands, as they were only allowed to discharge a certain level of effluent to the larger canals.

'National Ecological Network' (NEN)

The term 'National Ecological Network' (in Dutch: 'Ecologische Hoofd Structuur') was introduced in 1990s in the Nature Policy of the Ministry of Agriculture, Nature and Fishery. It was created with the intention to form a coherent network of important nature zones, as basis for nature conservation in the Netherlands. Within the 'National Ecological Network' (NEN), ecological corridors were zones that connected different nature areas to each other. In 1995 the central government drew the general boundaries and gave substance to the framework of the National Ecological Network (NEN). The Province of Overijssel created a clear ecological framework in order to safeguard and improve the quality of the 'crown jewels' of the province of Overijssel, of which in particular the 'National Ecological Network' (Streekplan Overijssel, 2000: 173). The Province drew 'arrows on the map', where ecological corridors needed to be realised (Personal communication Herman Arentsen, 08-07-2016).

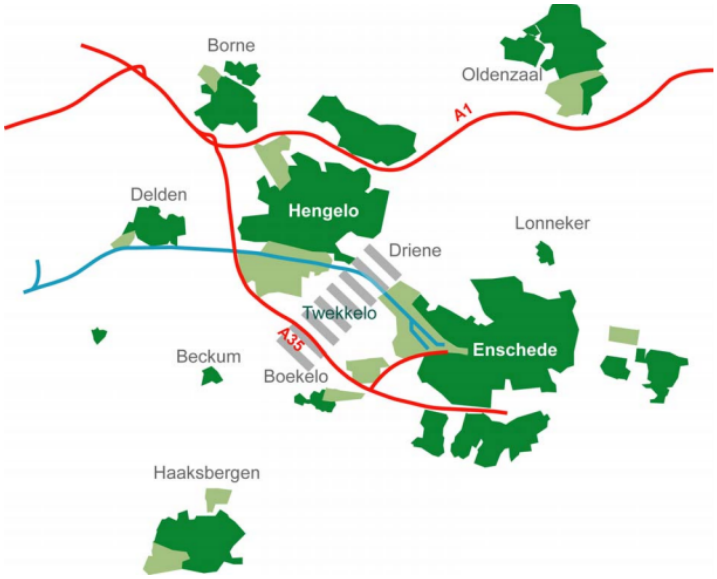


Figure 4 Ecological corridor in Twente: connecting Driene and Twekkelo

Rural Areas Development Act (WILG)

On January 1, 2007, the Rural Areas Development Act (WILG) was put into effect, which encompassed the Rural Investment Budget (ILG) and the instrument of land re-ordering. Henceforth, all power in terms of land consolidation were handed over to the province. Before January 1, 2007 this responsibility was in the hands of the land re-ordering committees (Voorbereidingscommissie Enschede-Noord, 2008). The law replaced the land re-ordering act and the land consolidation paragraphs of the reconstruction act. The central government established, in coordination with the provinces, a 7 year agreement for the development of the rural area, where the National Ecological Network (EHS) formed part of. The central government largely funded the acquisition of land and the installation costs from this Rural Investment Budget (ILG). Once the area was obtained, the central government largely financed the design and the parcels were transferred to conservation organisations such as Environmental organisation Overijssel (Landschap Overijssel), which would then be in charge of controlling and maintaining the area (Website Groene Ruimte).

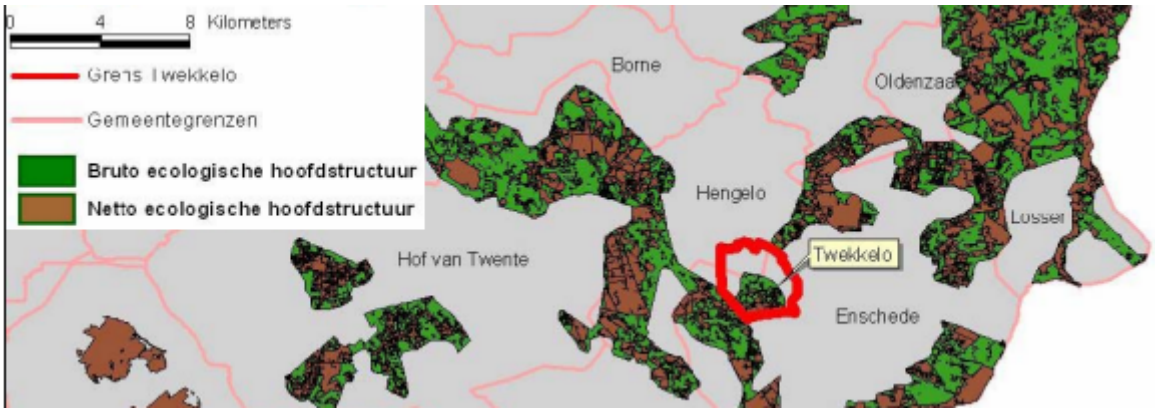


Figure 5 Illustration of the ecological network: the red line marks the border of nature area Twekkelo, and the green and orange territory is, respectively, gross and net zones of the ecological network.

Where the central government drew the general boundaries, the provinces had a leading, executing role as they determined the exact contours and created tangible areas in their regional plans. Next to this, they were responsible for controlling the land acquisitions – which were acquired by the Agricultural Land Management Office (Bureau Beheer Landbouwgronden)[4] – and they developed the appropriate nature in the NEN zone. Obviously, the National Ecological Network areas were included in the provincial environmental plan (in Dutch: Streekplan/Omgevingsvisie).[5]

[4] Agricultural Land Management Office (Bureau Beheer Landbouwgronden) formed part of the Government Service for Land and Water Management (Dienst Landelijk Gebied).

[5] The province of Overijssel eventually combined the regional plan, the traffic- and transport plan, the water management plan and environmental policy plan, and formed one complete plan: Environment Vision Overijssel.

The municipalities determined in zoning plans what was (not) possible in the National Ecological Network area, but these zoning plans must be approved by the province. The municipalities were requested to provide proper legal protection for the areas in the zoning plan.

In 2012 agreements were made between the central government and the provinces about decentralising the conservation of nature. In that same year an agreement was reached between the provinces and the central government that the Rural Investment Budget (ILG) would be ended and that nature conservation would be further decentralised towards the responsibilities of the provinces.

3.5 Land re-ordering committee

Land re-ordering processes are oftentimes long-term processes that take some time to be realised, due to their extensive preparatory phases and detailed procedures that have to be executed, in order to weigh the various interests. Different project phases should be followed and the involved parties are entitled to negotiate and to lodge objections Nevertheless, it is a valuable process that can be lucrative; they constitute a way to enhance the quality of rural life and to advance rural development (Personal communication Sander Uiterwijk, 18-07-2016).

Land re-ordering committee Enschede North

For the area of Enschede North a request for land re-ordering was done in 1988 by the municipality of Enschede and Stawel. The land re-ordering Enschede North covered the area between Enschede, Hengelo and Oldenzaal, with an area of approximately 4,600 hectares (Voorbereidingscommissie Enschede-Noord, 2008). The cause for the request to re-design the zone were the encountered difficulties in the coexistence of agriculture, nature, recreation, landscape and environment due to the parcelled area. Additionally, the city of Enschede intended to re-design the outskirts of the city, also referred to with 'urban fringes'.

In 1994 the Provincial Executive (Gedeputeerde Staten) installed a land re-ordering committee and formulated the task, by defining the bottlenecks, needs and objectives of each sector within this area (Voorbereidingscommissie Enschede-Noord, 2008). After the installation of the committee in 1994, it began shaping an inventory of necessary data, and subsequently started to draw up a comprehensive plan for the area Enschede North, with the aim to develop a vision for the area. In March 2000, the land re-ordering committee published a preliminary plan for land re-ordering Enschede North. Informational sessions were held to discuss the plans with the region (Voorbereidingscommissie Enschede-Noord, 2008).

Additionally, within the redesign of Enschede North a vision for the development of the outskirts of Enschede and Hengelo was drafted. This was commissioned by the land re-ordering

committee. Due to new agricultural policies on intensive farming and a change of legislation, the land re-ordering came to a standstill and the nature of the land re-ordering changed. In the mid-00s the land re-ordering project Enschede North was continued (Personal communication Sander Uiterwijk, 18-07-2016). On January 1st, 2007, the rural areas development act (WILG) was published. This act (WILG) generated the possibility for regions to make partial development plans. These plans were to be presented in the land development plan, which is required in projects where land consolidation is done. With the introduction of the rural areas development act (WILG), the land re-ordering committees were transformed into provincial advisory committees. Due to the changed legislation, the term land re-ordering committee Enschede North was changed into "preparatory committee Enschede North"(Voorbereidingscommissie Enschede-Noord, 2008).

Urban fringes and rural area

Because of the specific problems on the outskirts of Enschede, it was agreed upon to split the land development plan into two sub-plans; one for the urban fringes, and one for the rural area. The sub-plan for the urban fringes became the responsibility of a steering group in which the province of Overijssel, municipalities of Enschede and Hengelo, water board Regge and Dinkel and the Ministry of Agriculture Nature and Food Quality (LNV) were represented (Voorbereidingscommissie Enschede-Noord, 2008). The rural area sub-plan was drawn up by the preparatory committee Enschede North. During this period there was intensive communication with the region.

External consultants Bosch Slabbers and Arcadis were requested to prepare a plan of action and a layout for the intermediate area. The external consultants were supported by an administrative project group ecozone, in which the cities of Enschede and Hengelo and the water board were present (Raadsvergadering Hengelo, 2006). The administrative 'project group ecozone' presented a plan for the intermediate area, consisting of a design for an ecological corridor and water retention between the Twente Canal and the Hengelosestraat, to the project group- and the steering committee of the Urban Fringes Enschede North (see Fig. 9). The steering committee Enschede North adopted the plan – after hearing the council of Hengelo and Enschede – and used the plan as input for the development plan Urban Fringes Enschede North (Bosch Slabbers & Arcadis, 2006). After both of the sub-plans were finalised, they were combined to form the design of the development plan Enschede North, which was presented in July 2007 to the Provincial Executive. In October 2008 it was adopted by the Provincial Council. After the adoption of the land development plan, and once they had determined the final layout, the Provincial Executive (GS) decreed that the "implementation committee Enschede North" proceed with the implementation of the plans, functioning under the final responsibility of the Provincial Executive (GS).

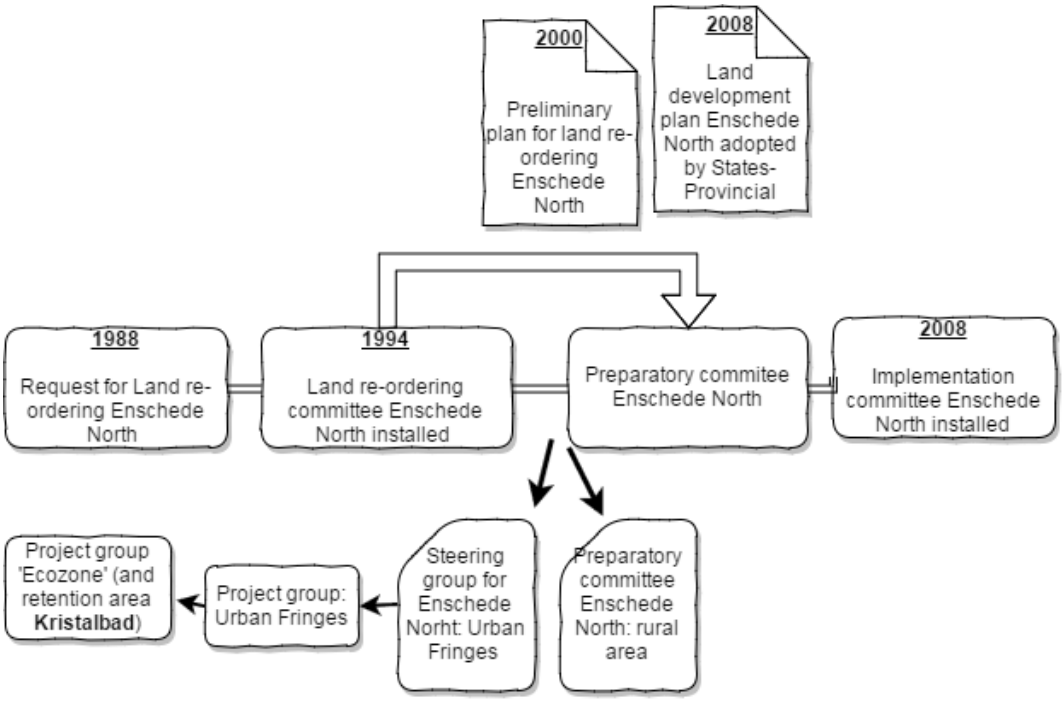


Figure 6 Timeline land re-ordering committee Enschede North, with project group 'Ecozone'

3.6 Implementation committee Enschede North

With the request for land re-ordering, a process was initiated that would eventually redesign the in the intermediate area between Enschede and Hengelo by coupling functions (Voorbereidingscommissie Enschede-Noord, 2008). The land development plan brought with it a balance between the interests of agriculture, nature, recreation, water, environmental and socio-economic aspects. With the intention to obtain and ensure public support for the development plan, the implementation committee decided that several interests in the implementation should be combined in an integral way. Given the complexity of the zone, the implementation committee decided that the different landscape functions could not be separated from each other, but instead should be coupled. Additional value would emerge when with the combining of multiple components.

Coordinating 4 modules

In order to execute the land development plan, an implementation committee and a management committee were established after the plan was accepted by the Provincial Council. The implementation committee Enschede North coordinated four different modules, in which the duration and implementation of the various modules differed. The modules were arranged and agreed upon within the land development plan Enschede North, and did not deviate from this plan (Kristalbad projectplan, 2010).

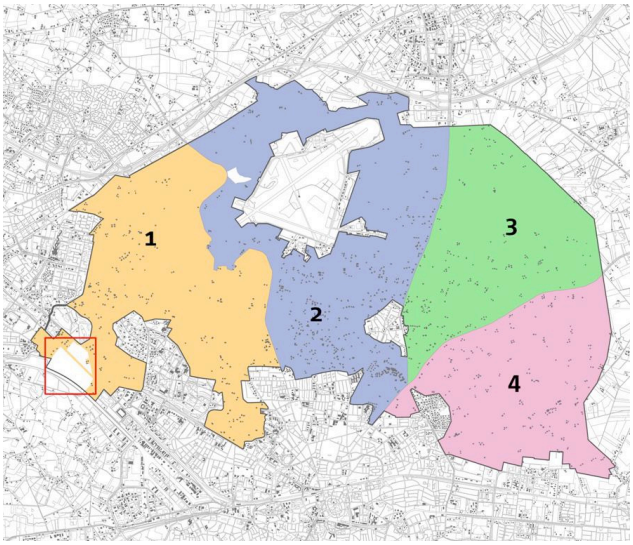


Figure 7 Module Uitvoeringscommissie, Dec. 18, 2009

The Enschede North area was divided into four blocks in which – in accordance with the land development plan – land consolidation would be carried out. One of the four modules was the Kristalbad project module. It formed part of the land development plan, but was left out of consolidation block 1 as the concerning lots were – or were about to be – acquired. Legal land consolidation did not have any influence on this project and therefore the Kristalbad project was placed outside of the blocks (see red square in Fig. 10).

Implementation of the Kristalbad module

Before the start of the implementation of the Kristalbad module, the various implementation modules of the land development plan Enschede North were aligned. This was done in order to clarify the measures, the to-be-performed actions, the responsibilities and the costs for the involved stakeholders. The Kristalbad project aimed for comprehensiveness, as did the land development plan. In an earlier stage, the water board Regge & Dinkel, the municipalities of Enschede and Hengelo and Province of Overijssel jointly created a development plan for the intermediate area between Enschede and Hengelo. This strategic plan was incorporated in the land development plan Enschede North by the implementation committee, and became the foundation of the project plan Kristalbad (Kristalbad projectplan, 2010). As water board Regge & Dinkel was the steering actor in developing plans for water retention – and putting this on the agenda of the land re-ordering committee – this party became the coordinating actor within the Kristalbad project (Personal communication Stefan Kuks, 30-08-2016). Figure 11 illustrates how the four different actors jointly created the strategic development plan. Cooperation between the implementation committee and water board Regge & Dinkel lead to the spatial execution project plan Kristalbad (Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel, 2009).

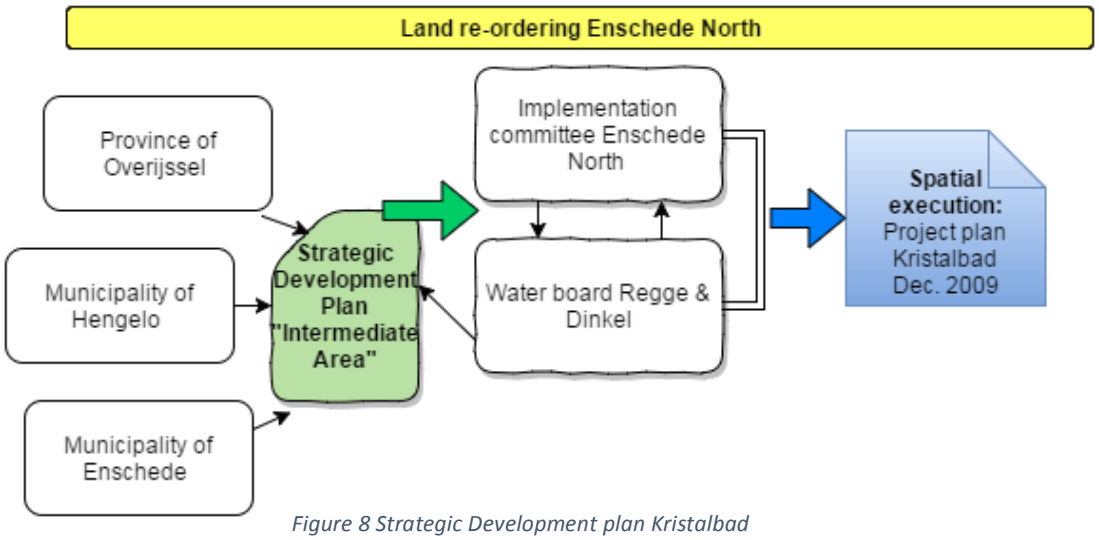


Figure 8 Strategic Development plan Kristalbad

3.7 Division of tasks

The aim of designing the project plan Kristalbad was to give substance to the desired objectives of the actors and to connect the several objectives to the necessary implementation aspects and costs. The practical arrangements and the allocation of costs and risks were decided upon, and the responsible party and funding of specific parts of the project were specified. The project plan was an elaboration of a governmental agreement made in June 30, 2009, between the province of Overijssel, water board Regge & Dinkel, the municipality of Enschede and the municipality of Hengelo. This agreement concerned the funding of the land costs of Kristalbad and the financing of the area development (Kristalbad project plan, 2010).

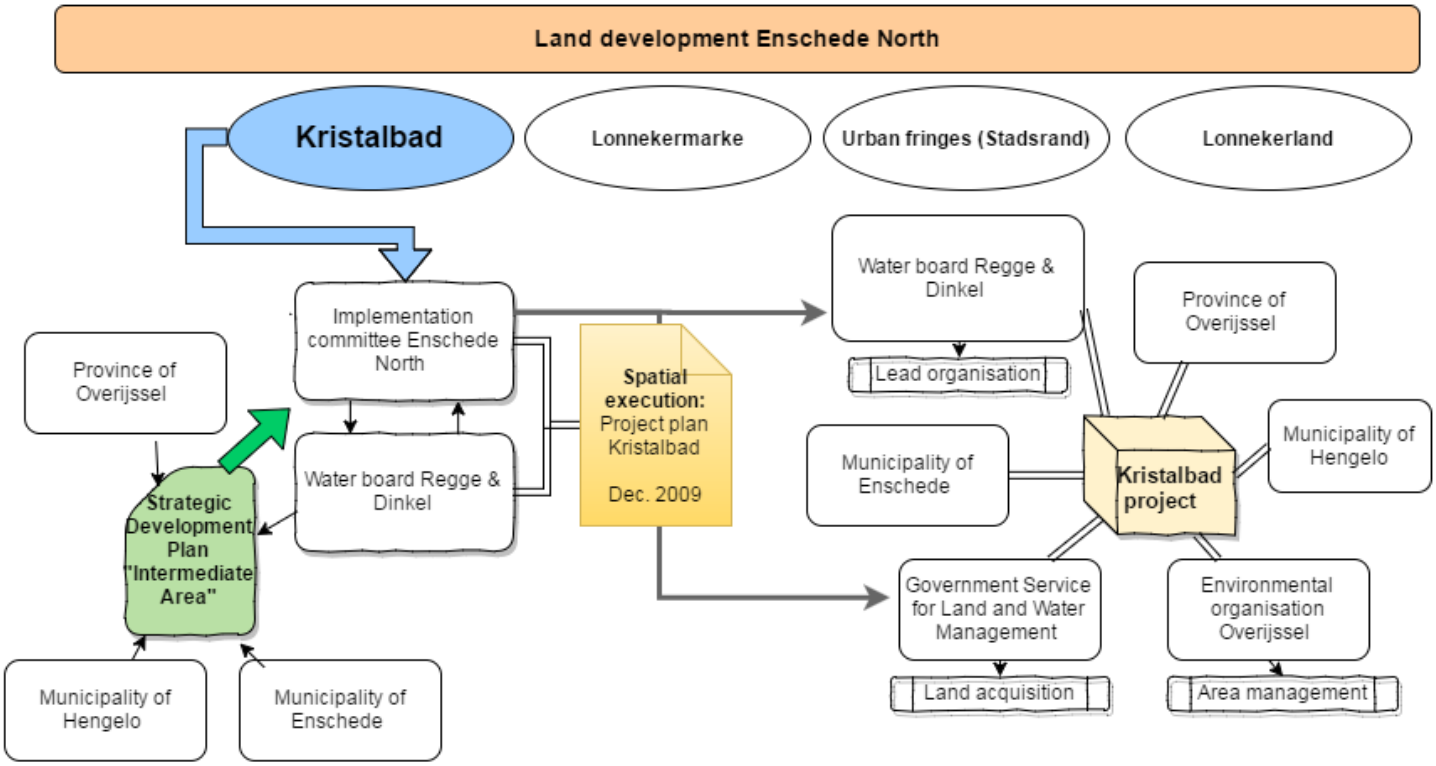


Figure 9 Overview of actors involved in the Kristalbad project

The legal status of the project plan

The Kristalbad project forms part of the land development plan Enschede North. The land development plan can be seen as an Memorandum of Understanding, in which the involved partners express their intention to execute the created plans. The execution of the land development plan is done through implementation modules and project groups. Where the initial plans of the preparatory committee for the Kristalbad in 2007 could be considered a 'sketch', within the implementation module the agreements needed to be crystal clear. The project plan needed to be adopted and approved by all parties, as with this document they were bound to financial and procedural obligations (Voorstel Gemeenteraad Enschede, 2007). When an implementation module is adopted and approved by all parties, the arrangement is binding (Voorstel Gemeenteraad Enschede, 2007).

Joint commissioning

In anticipation of the project plan it was agreed upon, through managerial compliance and administrative consultations, that the water board Regge & Dinkel would bear the responsibility for the organisational part of the Kristalbad project. This amounted to having both the executive and financial responsibility for the organisation, including division of costs and subsidies. The Government Service for Land and Water Management (DLG), which functioned as the secretariat of the implementation committee, was responsible for the land acquisition (Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel, 2009). Within the Kristalbad project there was joint commissioning: there existed a continuous alignment between the two tracks in order to complete the entire project.

Taking the lead

The approved project plan Kristalbad formed the basis for the implementation of the Kristalbad project and could be seen as the contract that all involved parties within the implementation committee approved. In the event that financial exceedance or changes would occur, the water board would inform the various financiers. Subsequently, the topic would be discussed by the implementation committee Enschede North (Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel, 2009). By signing the implementation module on December 18, 2009, the involved parties agreed on the distribution of costs and risks (Kristalbad projectplan, 2010). Water board Regge and Dinkel was, from this point forward, tasked to complete the Kristalbad project and to take a leading role (Personal communication Rolf te Velde, 24-05-2016).

Concluding overview of the actors

Over the years there was a lot of interaction and multiple reports were composed by the four different actors. The different visions on and designs for the zone were defined in documents, inter alia; Wet Structure Plan Hengelo Enschede (1992)[6], the Inter-municipal Structure Plan Hengelo/Enschede (1996)[7], the regional plan Overijssel 2000+ (2000)[8], Direction Intermediate Area Enschede-Hengelo (2002)[9], the Spatial Exploration Document Hengelo 2010/2030[10] (2004), the Spatial Development Agenda Network City of Twente (2005)[11], Ecological corridor Enschede-Hengelo (2004)[12], Water retention and ecological corridor (2006)[13]. These documents were the antecedents of the definite project plan Kristalbad that the implementation committee Enschede North presented of the implementation module Kristalbad and show a shift in perspective on the project.

In figure 12 an illustration is given of the land re-ordering project Enschede North and the various actors involved and their role in the initial phase of the Kristalbad project. The land re-ordering plans were divided over four modules, one of them being the Kristalbad project. Once all the involved actors had approved the project plan, water board Regge & Dinkel became responsible for the execution of the project. DLG took responsibility for the land acquisition (see arrows in Fig. 12). The involved parties that eventually worked together on the implementation of the Kristalbad project were the water board Regge & Dinkel, the municipality of Enschede, the municipality of Hengelo, Province of Overijssel, environmental organisation Overijssel (LO) and Government Service for Land and Water Management (DLG).

3.8 The Kristalbad implementation process

As soon as the project plan was accepted by the in the Kristalbad involved members of the implementation committee, the execution of the Kristalbad project could be started. The different participants had agreed on the financial and procedural aspects, wherein the project plan could be seen as a contract (Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel, 2009). In this paragraph the implementation of the project will be discussed by touching upon different topics, in order to – later on – discuss the interaction processes within this part of the process.

[6] Natte Structuurschets "Hengelo-Enschede" (1992) Heidemij Advies report, by Water Board Regge & Dinkel
[7] De Intergemeentelijke Structuurschets Hengelo/ Enschede (1996) by the Municipalities of Enschede and Hengelo
[8] Het streekplan Overijssel 2000+ (2000) by the Province of Overijssel
[9] Koers Middengebied Enschede-Hengelo" (2002) by the Municipalities of Enschede and Hengelo
[10] Ruimtelijk Verkenningsdocument Hengelo 2010/2030 (2004) by the Municipality of Hengelo
[11] Ruimtelijke Ontwikkelingsagenda Netwerkstad Twente (2005) by the Province of Overijssel
[12] Ecologische Verbindingszone Enschede-Hengelo (2004) Grontmij report, commissioned by Municipalities of Enschede and Hengelo
[13] Water retention and ecological corridor (2006) Bosch Slabbers & Arcadis report, commissioned by the Municipalities of Enschede and Hengelo, and the water board Regge & Dinkel

Project implementation

A systematic way of project implementation was exercised in the Kristalbad project by the water board. A plan of implementation was written, a project team was assembled and during the project regular progress meetings were held. The incumbent project leader installed various (administrative) project groups to develop different aspects of the project. Such as a technical-, spatial development-, land acquisition-, hydrological- and design team. In these teams the relevant partners within the project were participating, in order to jointly focus on specific tasks (Personal communication Rolf te Velde, 24-05-2016).

Next to these project teams, the project was directed by a steering group (management committee), which existed of the officials of the involved organisations. This group included the aldermen of Enschede and Hengelo, the delegate of the provincial executive, the manager of Environmental Organisation Overijssel and a member of the executive council of the water board (see Fig. 13). There were close connections between the involved administrative employees and the officials, and the collaboration between the different scales was not static, nor strict (Personal communication Rolf te Velde, 24-05-2016).

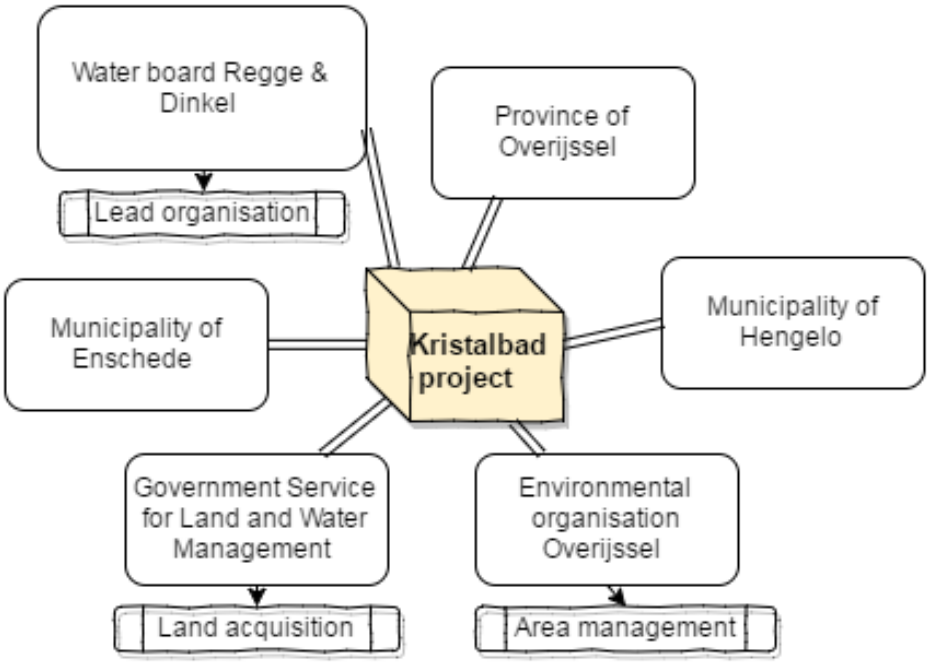


Figure 10 An image of the directly involved actors of the Kristalbad project

Design

In the design of the Kristalbad things became more complex over time. Due to acquired subsidies, the project leader was ought to take different timeslots and demands into account. In the illustration below a timeline is given of the final design of the Kristalbad. Key in the design was the value of spatial development and creation of new nature (Interview Stefan Kuks). Not only the province had given a certain worth to the development of the middle area in their regional plan, the water board was keen on constructing an outstanding 'piece' of nature as well (Streekplan 2000+). In the design, the different goals of the actors were included, without losing the spatial aspect. Over the years multiple designs were created, but in 2010 the definite design was presented: "Kristalbad. A crystallised combination of qualities", by the design agency Eelerwoude and landscape architect Abe Veenstra.

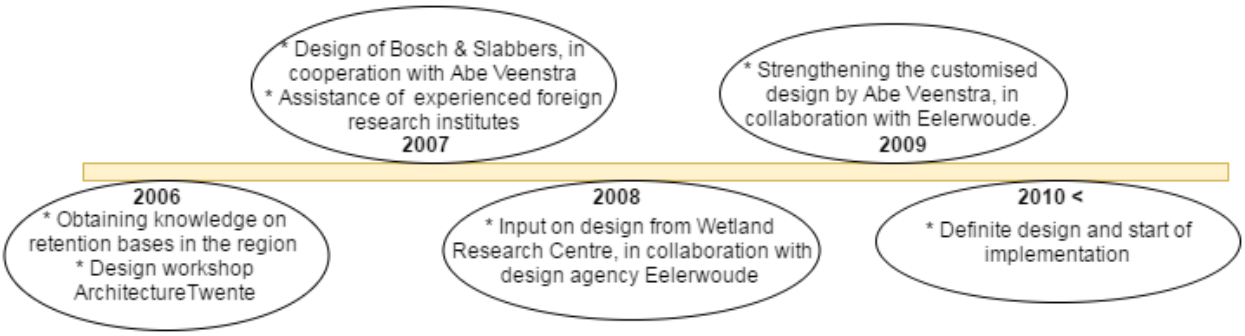


Figure 11 The process of designing the Kristalbad

Time

The project was implemented in phases, which was mainly done due to the irregular acquisition of land and the pressure to stimulate development, because of the agreements on co-financing. First, the Southern part was developed and executed, and subsequently the Northern part. This created an overlap in the project phases, where the tunnels below the railway literally formed the connection between the work of South and North. The project was implemented within the set timespan. Though some of the subsidies were postponed, only the aftercare was officially prolonged due to technical complications. Since these difficulties were resolved within the project, there was some delay on the original schedule. The completion and opening of the project was in October 2013.

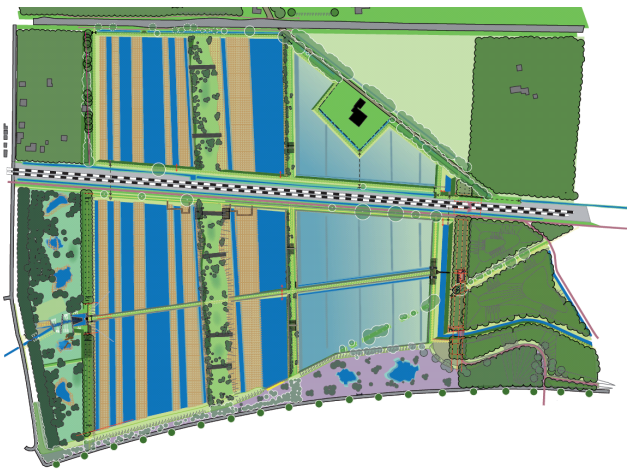


Figure 12 The different ponds of the Kristalbad: below the railway is the Southern part (first phase), above the railway is the Northern part (second phase). Hengelo is situated left, and Enschede right.

Costs

The project was realised through co-financing, which created a strict demarcation in which the results needed to be accomplished. The water board took the risk of including the co-financing within the budget, which made them responsible in case the subsidies would not be acquired. Thanks to the thorough preparation and unexpected lower charges for the procurement, the actual costs were lower than budgeted. Eventually, more revenue was realised than anticipated, because a part of the land revenue was not included in the project estimate. Additionally there was more subsidy for innovation obtained than in the initial budget was estimated.

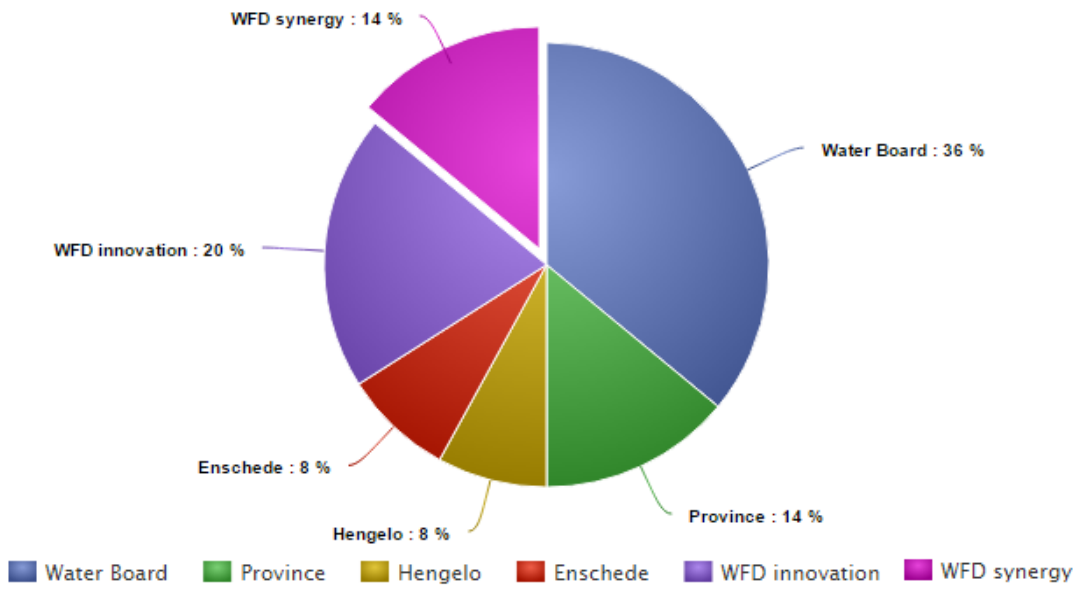


Figure 13 Pie chart of implementation costs Kristalbad project, showed in percentages

The implementation costs of the module were €6.070.000 million. Of this amount, €900.000 was financed by the Province of Overijssel, €515.000 was financed by the municipality of Hengelo, €515.000 was financed by the municipality of Enschede and water board Regge & Dinkel financed €2.160.000. The remaining amount was sponsored through subsidies: namely, WFD synergy fund €900.000 and WFD innovation fund €1.200.00 (see Fig. 16). In the implementation costs, the land acquisition is not included. At the same time, the land acquisition was an important part of the total cost for the government.

Communication

The Kristalbad project had two external communication tracks. Firstly, the communication with the local residents who were (directly) involved in the construction works. Every effort was done to communicate personally. The project leader of each organisation played a major role in this. The second communication track was towards the (indirect) parties involved; the citizens, the residents of

Twente (and particularly in the area of Hengelo and Enschede). This group was reached via media and other means of communication that were employed. The communication was carried out – as much as possible – in consultation with the partners. External communication was arranged by the organisation that was the expert in that area. In the communication on water storage, purification and the spatial layout (design and construction), the Water Board took the lead. With the themes of nature, landscape, ecological corridor, wildlife and recreational use Landscape Overijssel had a leading role.

Maintenance, management and monitoring

The creation of a maintenance and management document (BoD) was important throughout the project. With the initial design the focus was already on the outcome, and what it would mean for the management and maintenance after completion. The councils of the water board, of the Environmental Organisation Overijssel and both municipalities were involved and a division was made regarding the maintenance. As there were innovative features in the project, realistic estimates had to be made for the consequences for maintenance. The relatively long period of aftercare was related to the innovative nature of the project, such as the functioning of the water machine and the development of nature. Within the water-harmonica, several cases had been monitored, were included in reports, and there was an investment in fixed equipment to take measurements for the years after.

The results of the project

The Kristalbad project is nowadays characterised through its multifaceted components. Next to water storage, the Kristalbad eventually functions as an ecological corridor, the effluent is purified through the water-harmonica, the project contributes to spatial quality and preservation of nature values and can be of recreational use (Kristalbad 'Schakel tussen land en stad, droog en nat', 2011).

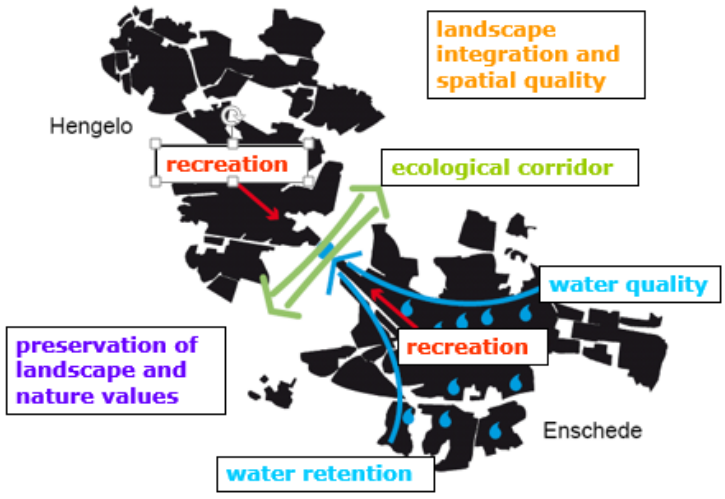


Figure 14 The different functions of the Kristalbad project

Chapter 4. Actors' core characteristics within the interaction processes

4.1 Introduction

When redesigning a certain area, or when assigning specific functions to a zone, different parties are involved. Each actor has its motivations, resources and underlying cognitions that are liable to change over time. In the previous chapter, in order to describe the Kristalbad, we looked at the specific context to expatiate on the geographical influence and the impact of the project's history. This chapter will be focussed on the distinctive interaction processes that are recognised within the process of the Kristalbad project. The Contextual Interaction Theory (CIT) framework will be elucidated and subsequently utilised in order to describe the actors' core characteristics in the different selected interaction processes, which will lead to answering the following research question:

> *What were, over time, the motivations, cognitions and resources of the actors involved within the Kristalbad project?*

Though at first sight this research question appears to be of descriptive nature, it has also an explanatory nature, as it pinpoints the important interaction processes within the project process and it is analysed how actor characteristics influence each other. Firstly, the parties involved in the Kristalbad project will be elaborated upon. Subsequently, the interaction processes happening over time will chronologically be touched upon, by delineating the actor constellation, the interactions between the involved stakeholders and therein the role of their core characteristics. This, simultaneously, will allow us to analyse the collaboration between the actors and to conduct an explanatory analysis regarding the boundary judgements of those actors. Boundary judgements play an important role in interaction processes. The core characteristics of the involved actors in an interaction arena, along with the contextual factors, are expected to influence the interaction process, but also are believed to affect the actor's boundary judgements as well (Bressers and Lulofs, 2010: 17). To define the boundary judgements within the interaction processes, it becomes necessary to formulate the next sub-question:

> *What role did the boundary judgements play within the interaction processes?*

As the perceived boundaries contribute to the position or strategy of an actor within a collaboration, this sub question is fundamental to approach the central research question on boundary spanning. In answering this sub question, the definition of boundary judgements of Bressers (2009)[14] will be used for the analysis of the discussed interaction processes. The three main dimensions that can be used to

[14] Boundary judgements are considered to form a specific part of an actor's cognitions. Boundary judgements are socially constructed definitions of the domain of policy innovations in terms of relevant scales, sectors and temporal dimensions (Bressers, 2009).

delineate the boundaries of the domain (i.e., the sector dimension, the scale dimension and the temporal dimension) will be touched upon (Lulofs and Bressers, 2010: 12). In this delineation the dynamics of the actors' core characteristics and the boundary judgements will be emphasised. The core characteristics and boundary judgements (which are part of the actors cognitions) of the within the elaborated interaction processes will be explained by answering these two sub questions.

4.2 Identifying the players

This paragraph will reflect upon the various involved parties and their original intentions for the intermediate area between the cities of Enschede and Hengelo. This will provide a starting point of for stakeholder constellation, which will subsequently provide access to multiple sub-processes. The following actors in the Kristalbad project will be discussed:

- Water board Regge & Dinkel (currently under the name Vechtstromen)
- Province of Overijssel (Provincie Overijssel)
- Municipality of Enschede (Gemeente Enschede)
- Municipality of Hengelo (Gemeente Hengelo)
- Government Service for Land and Water Management (Dienst Landelijk Gebied; DLG)
- Environmental organisation Overijssel (Landschap Overijssel; LO)

Identifying the problem

Where the Kristalbad is situated now, there was already a smaller retention that was created in the 50s (Personal communication Jan Rikus van Limbeek, 24-05-2016). Because of a predicted increase of precipitation, the water board needed to extend the water retention facilities. Water board Regge & Dinkel was responsible for surface water in the urban area, and in rural areas for surface- and ground water.[15] Though the water board wanted to realise water retention they did not encounter cooperation among other parties in this early phase. The motivations and priorities within the development of the 'in-between area' were conflicting, and no common ground was found to realise the water board's goals (Personal communication Ben van Veenen, 27-06-2016). The water board Regge & Dinkel suggested providing a financial contribution based on the mono-functional function, with an average price for the land (in rural areas). Nevertheless, not including the other stakeholders' objectives proved too archaic as approach. In the next paragraphs the initial positions of the involved actors regarding the intermediate area will be explained in order to connect these primary characteristics to the interaction processes that will be analysed later.

[15] In order to effectuate the vision of the 21st century Water management Committee (2000) on resilient water and adapting to climate change, the overflow frequency on the Twente canal needed to be reduced.

4.2.1 Water board Regge & Dinkel

Water board Regge & Dinkel focused[16] on the regulation and care of the weirs, water quantity, water quality and sewage treatment – predominantly the purification of wastewater. In 1992 the water board demonstrated in a study called 'Wet Structure Plan' that in-between Enschede and Hengelo water storage needed to be enlarged for the benefit of water management. The water board produced a document that indicated which bottlenecks were present in the water management of the intermediate area – regarding discharge of effluent and overflow water – and stated the necessary measures to eliminate these bottlenecks (Memo middengebied, 2002). In order to keep people's feet dry in Hengelo, the water board Regge & Dinkel needed a solution to keep the storm water from streaming directly to Hengelo. Water storage in the intermediate area between Enschede and Hengelo – to temporarily retain the water – would be a sustainable solution to protect Hengelo from future flooding. From the conducted research it was learned that a storage pond with a surface of 13 hectares would be the minimum needed. At that time, the water board had already acquired resources for this purpose (Raadsvergadering Hengelo, 2006). An underlying motivation was to make the water system more resilient and climate proof (Toelichting bestemmingsplan, 2013: 37).

4.2.2 Province of Overijssel (Provincie Overijssel)

The province of Overijssel could be regarded to be the provincial government that is located between the central government and the municipalities. It had the motivation to create an ecological corridor in the intermediate area between Hengelo and Enschede. The realisation of an ecological zone was part of the national and provincial nature conservation policy (i.e., National Ecological Network[17]). Due to the expansion of urban areas and the construction of infrastructure, the cities of Twente threatened to become an elongated urban area with barely any green connections (Streekplan Overijssel 2000+, 2008). Nature in the project area was fragmented and intersected, but there were still some open areas left between the two cities. One of the tasks within the Streekplan 2000+[18] was that within the urban development of the city link, ecological corridors would be developed and the green lungs and city parks would be further developed in the cities (Streekplan Overijssel 2000+, 2008). Additionally, the policy intended that an ecological relationship between Driene and Twekkelo would be restored in the intermediate area. A green arrow was drawn on the map, marking the zone that would be used for

[16] Due to the merge of the water boards Regge & Dinkel and Veld & Vecht, the official name of the whole water board is since January 1, 2014 'Vechtstromen'.
[17] National Ecological Network (NEN), in Dutch: Ecologische Hoofdstructuren (EHS).
[18] The regional plan (streekplan 2000+ Overijssel) – nowadays called 'The Environment Vision' (Omgevingsvisie) – was the central provincial policy for the physical environment of the province of Overijssel (spatial, water and environment).

the ecological corridor. This would provide for a safe crossing between nature zones for different animals such as small mammals amongst whom mustelids, deer, butterflies and amphibians (Streekplan Overijssel 2000+, 2008). Furthermore, the province of Overijssel, as provincial government, was closely related to the water board, due to its controlling function. The unexpectedly high volumes of precipitation made this task more important as they wanted to secure Hengelo's safety of flooding.

4.2.3 Municipality of Enschede (Gemeente Enschede)

The urban fringe, where the urban area merges into a nature zone, was considered an important recreational area for the residents of the city of Enschede (Voorstel Gemeenteraad Enschede, 2007). The motivation of the municipality of Enschede was to use the opportunity to redesign the cities' urban fringes (Land re-ordering committee Enschede North and South) and create a natural zone on the outskirts of their city where inhabitants could peacefully enjoy nature. In the outskirts, the emphasis lay on nature and landscape experience, coupled with art and culture. The many cycling, hiking and riding trails already were thought to offer various opportunities to enjoy the urban fringe. The municipality of Enschede aimed for a new design of the city's outskirts concerning nature, landscape, habitat and recreation (Kristalbad 'Schakel tussen land en stad, droog en nat', 2011). Therefore, the objectives of the city of Enschede were recreation, more tourism and to improve the amenity and accessibility of the rural area. Enschede was working on the extension of the existing leisure area Go Planet, the Arke Stadium and the new ice rink (Raadsvergadering Hengelo, 2006).

4.2.4 Municipality of Hengelo (Gemeente Hengelo)

Hengelo is under direct influence of Enschede's water plan, as the city is located downstream. During heavy rainfall the level of the Elsbeek Brook would increase and the city would have to cope with extra water. The municipality of Hengelo is dependent on the sewage treatment plant of Enschede due to the effluent that is streaming towards Hengelo. The redesign of Enschede North appeared to be a good occasion to resolve the flooding issues, though the intermediate area was located more so on the West side of Enschede than in the Northern part. In addition, many developments regarding sports and leisure were considered in the middle area between Enschede and Hengelo (Raadsvergadering Hengelo, 2006). In the urban fringes of the city, developments for urban expansion were planned; a further expansion of the Veldwijk district was discussed. Next to this, explorations were done to improve the accessibility of the infrastructure for the city edges and the central area.

4.2.5 Government Service for Land and Water Management (Dienst Landelijk Gebied; DLG)

The Government Service for Land and Water Management (DLG) was the preeminent organisation that carried out land consolidation in the Netherlands, as the executive body of the land re-ordering committee. DLG developed rural areas in the Netherlands to strengthen the natural and agricultural structures on behalf of the central government.[19] DLG took care of the implementation and execution of land re-ordering policy, which involved complex, perennial projects (Personal communication Sander Uiterwijk, 18-07-2016).

The Government Service for Land and Water Management (DLG) – with its sub-committee Agricultural Land Management Office (BBL) – was commissioned by the central government and in charge of acquiring the land positions in the intermediate area. DLG was involved with redesigning the intermediate area and provided the manpower for the land consolidation of the redesigned Enschede North. DLG assumed the role of secretary in the implementation committee and was responsible for the acquisition of the land and the necessary coordination between the various actors involved. They had to monitor the balance between the Kristalbad project and its surroundings. They had the knowledge and mandate from the central government, but were commissioned by the province. DLG had a partially independent position, as they were not connected to the other actors in another way, nor did they have any objectives of their own. This made them a neutral player within the interaction processes (Personal communication Sander Uiterwijk, 18-07-2016).

4.2.6 Environmental organisation Overijssel (Landschap Overijssel)

Environmental organisation Overijssel (LO) is a nature foundation and area manager of nature in the province of Overijssel. The organisation was supporting the idea of an ecological corridor, as there were only a few open spots between Enschede and Hengelo. They endorsed the need for a green connection between the nature zones Twekkelo and Driene. To realise the ecological corridor, nature hectares needed to be acquired. In some provinces the nature hectares went to a specific organisation. In this case Environmental organisation Overijssel was appointed as nature manager. The construction of the Kristalbad offered the opportunity to make good use of empty 'in between' lots through strengthening the landscape by granting it its own identity (Kristalbad ‘Schakel tussen land en stad, droog en nat’, 2011). The preservation of the landscape proved to be valuable, due to a number of historical elements and routes such as the Kettingbrugweg (an old boundary marker).

[19] DLG was originally an agency of the Ministry of Economic Affairs, and later on of the ministry of Agriculture, Nature and Fishery.

4.3 Interaction processes

In the process and the interaction arena of the Kristalbad project, sub-processes of interplay between actors on specific issues can be distinguished. In this paragraph a chronological overview is given of the various sub-processes, in order to provide insights on the process as a whole. The interaction between the actors will be explained through using the actor characteristics as elaborated within the CIT model. The first interaction process will be the initial planning of the Kristalbad.

I. The initial planning of water retention in the intermediate area

Because of the aforementioned predicted increase of precipitation, the water board Regge & Dinkel was to extend the water retention facilities[20]. This could be considered a cognition of the water board: the perception of a need and the responsibility to act upon it. Secondly, in order to effectuate the vision of the 21st century Water management Committee (2000) on resilient water and adapting to climate change, the overflow frequency on the Twente canal needed to be reduced. This was an external influence of the governmental structure on the water board's behaviour. The water board had problems adhering to the maximum amount of water that could be discharged in the Twente canal. With no possibilities of directing the storm water towards the Twente canal, they opted for enlarged water retention.

Initially, the water board was planning to create standard water storage. From conducted research it was learned that a storage pond with a surface of 13 hectares would be the required minimum. Nevertheless, a mono-functional project was not successful, nor supported by the municipalities, due to a lack of resources such as ground positions (Personal communication Jan Rikus van Limbeek, 24-05-2016). Excluding the other stakeholders' objectives appeared to be an approach that was too archaic. The water board suggested that in case of a multi-functional purpose, more space would be needed for landscaping, recreational and ecological functions. They highlighted that the development in the area was a shared responsibility, because both of the municipalities had an interest in the safety in Hengelo, good water quality of the Twente shipping canal and a sustainable, spatial buffering function between the two cities (Memo middengebied, 2002). The water board suggested to provide a financial contribution first, based on the mono-functional function, with an average price for the land (in rural areas). The extra costs for a larger multifunctional area would have to be borne by the municipalities (Memo middengebied, 2002). Due to urban developments, the local land price in that area was much higher than average, because the spatial developments boosted the prices (Personal communication Herman Arentsen, 08-07-2016).

[20] Water board Regge & Dinkel was responsible for surface water in the urban area, and in rural areas for surface- and ground water.

Analysis with Contextual Interaction Theory

Cognitions

The water board, at that time, perceived it to be their duty to realise a water storage pond, as they were in charge of water management and wanted to prevent flooding in Hengelo. Simultaneously, they had to control the discharge of effluent in the Twente canal. With water safety high on their list of priorities, they were motivated to (and accountable for) realising effective water management in this area. The realisation that a mono-functional project would not work is a change of cognition by the water board. The interaction process influenced this core characteristic, as the project continued to be ineffectual and was not making reasonable progress. Over the years, there had been a switch in the water board's vision from quantity to quality; the 'token bushes and trees' were replaced by a functional green area.

Motivations

The input for this interaction process was the water board's motivation to create water retention in the intermediate area. Within the area, the municipalities of Enschede and Hengelo were involved, but at the time they had different motives and priorities regarding the intermediate area. Enschede was more interested in urban development of the area and Hengelo desired to extend the green, recreational buffer zone (Personal communication Ben van Veenen, 27-06-2016). And so the motivations for developing the 'in between area' were conflicting, and no common ground was found to realise the water board's goals (Personal communication Ben van Veenen, 27-06-2016).

Resources

The water board did not have enough financial resources available to create a water retention base on its own. The water board did not find the resources (e.g., legislative power, managerial persuasiveness or financial resources) to convince the other actors to participate. Though the water board aimed for realising water retention, it did not encounter cooperation among other parties in this phase, due to the personal goals and values of the involved partners. The landholding in the intermediate area was intentionally obtained at an early stage to provide the water board with some strategic and well-located land. These parcels were acquired to be of use for future land exchange in order to obtain more strategic lots, which was a move based on intuition (Personal communication Piet van Erp, 28-07-2016). The council of the water board made a strategic decision in order to strengthen its position in the intermediate area. The threshold and the risks for the water board to acquire the lands was low, as the parcels in the middle area were considered 'hot ground', and were seen as highly marketable due to the high interest in the zone (the ambitions of Twenstestad). Nevertheless, the water board could not commence creating water retention, as the parcels needed to be attached in order to create

a pond. Realising water storage without partners would lead to high costs for the water board, which was not desirable, the water board as a public institution sought public support for the project. The water board underestimated the power balance in the intermediate area. Though in the beginning a quantitative task of water storage was still planned to be established, these grounds would later on provide a positive position of bargaining for the water board. A different approach was necessary in order to draw the attention of the diverse actors and to realise water storage.

Boundary judgements within the interaction process

Sector dimension

Within this interaction process, the boundary judgements of the different actors on the sector dimensions were divergent. The problem definitions of the various organisations were not matching up and the required strategies to find a collective solution were not supported, because they were not considered relevant at that time. The water board could not convince the municipalities that collaboration was necessary and they were not flexible in redefining their boundaries. The sectoral domain perceptions were diverse in this phase; where the water board was focusing mainly on the aspects of water management, the municipalities concentrated on financial interests of landholding or other objectives. No bridges were built by making linkages to overcome these differences.

Scale dimension

Regarding the scale dimension, geographical location and magnitude of the water retention pond were not agreed upon. The required lots were not in possession of the water board, which made them dependent on the municipality of Enschede that had a strong landholding position in this area. The municipality was not willing to devaluate expensively obtained land with the intention to turn it into water area. Over the years, water board Regge & Dinkel meanwhile acquired some strategic lots in the intermediate area between Hengelo and Enschede. From 7 hectares they went to about 14 hectares in the zone, though a plan for the Kristalbad had not yet been formulated (Personal communication Jan Rikus van Limbeek, 24-05-2016). The project was arranged on the administrative level on a local scale. In the beginning, the water board did yet not give managerial support to the Kristalbad project, which resulted in muddling through on the administrative level.

Temporal dimension

Within this interaction process there was no momentum for the project. The time horizon for the project of the water board was very future oriented, in order to cope with heavy rainfall. The municipalities were on a different time horizon; they were more focused on their landholding and destination plans, including the financial consequences. By having a different time horizon, the

boundary judgments were divergent, as the direct need for water retention was not perceived within the field of vision of the municipalities. In order to create the necessity a change needed to be made to effectuate the water storage.

II. Multi-lateral alignment: land re-ordering committee as an organisational vehicle

When the land re-ordering committee was established the preparatory committee was weighing the different interests of the actors.[21] During the preparatory phase, project groups were formed to discuss the size, functions, finances, goals and implementation of the upcoming project. As the relevant stakeholders of the area were all involved within the land re-ordering committee, the connections between the diverse parties and levels were powerful. The land re-ordering committee became the administrative 'vehicle' through which the Kristalbad would be developed (Personal communication Martien Knigge, 12-07-2016).

The Kristalbad eventually was a part of the redevelopment of the urban fringes of Enschede-North. For this element of the land development plan a steering group and project group were established. Along with the general project group, a special 'Eco zone' project group was assigned, wherein different administrative employees were exploring the opportunities for an Eco zone in the intermediate area. The province of Overijssel needed to adhere to national policy on nature conservation and had reserved a budget to support the development of rural areas, so municipalities could hire an external consultant (Bosch Slabbers & Arcadis, 2006). This consisted of working hours purchased by the province for external consultants, for which municipalities could apply within the framework of reconstruction of rural areas.[22] In collaboration with the consultancy agencies, the administrative 'project group Eco zone' developed and presented a design for the intermediate area, in which the aspects of water storage, ecology, landscape and recreation were brought together in an integrated spatial plan (Bosch Slabbers & Arcadis, 2006). This preparatory work can be seen as an important interaction arena, as the actors were working together and discovering boundaries. Within this project group a lot of preliminary work was done by the advisors of the different actors, which would found the base of the further project (Personal communication Ben van Veenen, 27-06-2016). The chosen structure and design of the area was based on the area's functionality as a water storage

[21] In 1994 the Provincial Executive (Gedeputeerde Staten) installed a land re-ordering committee, to draw up a comprehensive plan for the area Enschede North, with the aim to develop a vision for the area. In March 2000, the land re-ordering committee published a preliminary plan for land re-ordering Enschede North (Voorbereidingscommissie Enschede-Noord, 2008). More information on the land re-ordering committee is provided in section 3.5 of this document.

[22] This preliminary designing process was put in motion before it the implementation module of the land re-ordering committee was established.

area and ecological corridor; these were ideas supported by the collaborating stakeholders.

Analysis with Contextual Interaction Theory

Cognitions

The involved actors needed to look at the bigger picture and listen to each other in order to realise their own goals (Personal communication Martien Knigge, 12-07-2016). The province of Overijssel adhered to national policy on nature conservation and underlined the importance of the National Ecological Network within the province of Overijssel. As the municipality of Enschede was planning to redesign the urban fringes and re-order Enschede-North and Enschede-South, they had the opportunity to think of a solution for the existing problem of storm water storage (Personal communication Hans Koier, 05-07-2016). This is an important perspective on the situation, as it reflects Enschede's cognitions. The municipal council of Enschede had envisioned a twofold function for the intermediate area between Enschede and Hengelo. At one side, it would involve the construction of sport- and leisure facilities, while at the same time it would become an environmental corridor, including water retention (Gemeente Enschede, 'Kleur Bekennen' 2006). On the side of Hengelo, there was a residential area, bordered by an area with municipal gardens and sports fields and an old road (Kettingbrugweg). The municipality of Hengelo was willing to cooperate; they wanted to create a buffer between the two cities. Additionally, Hengelo needed these measures to take place because of the redundant storm water running from the higher located Enschede towards Hengelo. The water board held a perspective that consisted of the search for interlinking the water board's aims and the values that society and the environment grant to water, which was called 'contextual water management'. This should be considered an important cognition of the water board, as it reflects their perspective on collaboration with the other parties.

Motivations

Over the years, the parcels did not prove to be very marketable, due to the economic crises and the cancelling of the 'Twentestad'. The motivations of the water board and the municipality of Enschede were conflicting, as the municipality of Enschede was holding on to its land, while the water board had the intention to merge the various parcels into a retention area. With the rest of the lots in the hands of private owners, there was not much flexibility in the middle area to realise the needed water retention capacity. Enschede had mostly financial interests in the area and Hengelo focused on keeping the developing Enschede away (Personal communication Ben van Veenen, 27-06-2016). The economic planning team of Enschede was reluctant to give up the lots for nature purposes. Either way, the costs of the acquired lots needed to be reallocated, as a big financial loss could not be justified;

Enschede had invested in the land positions. In the meanwhile, Hengelo saw possibilities for generating recreational nature and a green buffer zone.

The level of trust between the two municipalities was low, which was reflected in the organised meetings. On the meetings of the project group 'Eco zone', the administrative advisor of the water board stood in between the two opposing parties (Personal communication Ben van Veenen, 27-06-2016). The municipalities of Hengelo and Enschede had second thoughts on the sharp lines and desired the design to be in line with the rural structure of the area (Bosch Slabbers & Arcadis, 2006). Their motivation was to make it a natural landscape, wherein human intervention was not obvious. As the municipalities were not necessarily agreeing on the different aspects of the design, the water board took the chance to jump in between and present its arguments on an ecological corridor with water retention (Personal communication Ben van Veenen, 27-06-2016). In the first meetings, the water board's advisor was imprecise about the exact dimensions of the ecological corridor. This was intentionally kept vague and broad in order to be able to include the water retention later in the process (Personal communication Ben van Veenen, 27-06-2016). The fact that the ecological corridors formed part of central- and provincial government's policy strengthened this argument. It was decided that other development plans were not allowed to have negative impacts on the creation of the Eco zone, and water retention and recreational use would be combined (Gemeente Enschede, 'Kleur Bekennen' 2006).

Resources

Since the Kristalbad project was included in the land re- ordering project, the province could use legal instruments and funding from the land re- ordering project for the realisation of the project. The national government had in 2007 passed an amendment to the land re- ordering act, which led to a looser policy on the use of funding from the land re- ordering policy. The renewal of reconstruction act – due to the economic crises and renewed policy on intensive farming – caused a change of identity in the land re-ordering committees. This made it possible for the Kristalbad module to benefit from the funding for the creation of an ecological corridor within the so- called National Ecological Network (EHS). Possible resources were generated, upon which project could be built. This made the land re-ordering committee a strong instrument to use in developing the intermediate area.

The Province was responsible for deciding which zones to select For the National Ecological Network (EHS) and the municipalities had the task to zone the areas and to provide the suitable legal protection. The purchase, installation and management of the land was merely subsidised by the central government. The great advantage of combining sources of money and expertise was generated by linking the water board's objective of water storage to the provincial goal of realising an ecological

corridor. In this, creative project design of matching different goals was beneficial for both (Bressers and De Boer, 2013: 31). The costs for the implementation of the land development plan would be covered by contributions from the central government, the province, the water board, municipalities and individual owners, according to an established scale (Voorstel Gemeenteraad Enschede, 2007). For the period up to 2010, funds were reserved in the municipal programme budget of Enschede. In addition, based on the experience of other land development projects, applying for subsidies was possible (e.g., from the European Union and the Ministry of LNV). An application for a European subsidy for urban fringes was organised (Interreg IVB North Sea Programme), though the Kristalbad in the end was not eligible for this funding (Voorstel Gemeenteraad Enschede, 2007). Resources of the water board were made available within the multi-year assessments and budgets, and individual/joint credit grants that were approved by the council. The municipality of Hengelo would enter the project for the same amount as Enschede, establishing the division of the costs at 10% for both of the municipalities, 40% for the water board and 40% for the ILG budget of the Province (Personal communication Rolf te Velde, 24-05-2016). This was the initial division of costs, as documented within the land development plan. Nevertheless, these costs were an estimate and not definite; agreeing on the implementation module would enter the actors into a binding contract.

Boundary judgements within the interaction process

Sectoral dimension

While the water board first stood alone in the water storage planning, once combined with ecological purposes it was now slowly getting picked up by the other actors (e.g., the Province with its ecological network, the municipalities with their recreational motivations). Because Hengelo wanted to slow down Enschede's urbanisation, a green recreational buffer appeared to be a possible measure and a motivation for them to join this project. This interaction within the project group gradually shaped the development direction for the intermediate area, which leaned towards an ecological corridor, water retention, improvement of water quality and extensive recreation. While the water board in the very beginning opted to realise water retention on its own, it changed its cognitions regarding the mono-functional project and widened its boundary judgement regarding the sectoral dimension. No longer was the key element water alone, but by bringing in nature purposes, the boundaries of the other actors changed as well. The goal was a sustainable balance between the various, quantitative use functions of ground- and surface water and the objectives of the other parties (Waterbeheerplan Waterschap Regge en Dinkel 2010 > 2015). Spatial planning and water issues afterwards became inextricably linked. Recreation, (the threat of) urbanisation, water safety and nature conservation, water played a central role in all.

Geographical scale and administrative scale

The study the water board conducted produced the result that an optimal Eco zone would be 1000 meters wide. Nevertheless, a feasible lower limit would be 500 meters, including an internal buffering of 100 meters on both sides (Raadsvergadering Hengelo, 2006). The width of the ecological corridor was under dispute, as the municipality of Enschede wanted it to keep it as marginal as possible. Herein, the boundary judgements on the geographical scale played a role. The resources (landholding) of the municipality of Enschede were key and created a discussion on the size of the corridor.

The administrative level where the Kristalbad project was developed broadened, as multiple parties got included and they were weighing their interests. Where in the initial water plans of the water board the actors and policies were explored on a local domain, the water board now addressed different administrative levels. The managerial representatives now became interested, too. The plans for an integration between water and nature goals was supported by the Province of Overijssel, which adhered to national policy on nature conservation plans. From this point on, the project was embedded within more administrative levels, which generated support for the combination of water and nature goals throughout the project group.

Temporal dimension

Water storage to tackle the water problems of the neighbouring and downstream Hengelo needed to become urgent in the eyes of upstream Enschede. Though the water hindrance in Hengelo occurred in the past and had been present for some years, the redevelopment of the Enschede-North area happened to be the possibility to respond to it.

A project like the Kristalbad takes a considerable amount of time. In addition to adding complexity, herein also lay opportunities. Each party had their own time horizon and goals to achieve. For the water board the goals were clear and they acknowledged that they needed the other stakeholders in order to reach them. Over the years, the actor characteristics of the other stakeholders – and the specific context – changed, which caused the interaction process within the arena to change, as well. Thus, it can be stated that the water board strategically pursued changes (or waited for the right moment) to create a more favourable setting.

III. Division of costs: managerial meeting June 30th, 2009

As soon as the implementation module would be agreed on, project plan Kristalbad could commence (Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel, 2009). Nevertheless, it was not

easy to generate an agreement on the implementation module, as all the involved parties had to agree on the financial aspects before the project could be incorporated within it. The land development plan agreed on a 40: 40 : 10 : 10 division (water board : province : Enschede : Hengelo). This initial budget was modelled on implementation costs. Old standards were applied that made the document out-dated (Interview H. Arentsen). When looking at the actual costs of land positions and implementation, it would not correspond with the initially estimated amounts. Civil servants of the water board and the province of Overijssel, in collaboration with the DLG – who was accountable for the feasibility of the implementation module – developed a new, feasible overview of the costs in June 2009 (Interview H. Arentsen).[23] This was done during the planning of the preparatory committee Enschede North, where all the cards were put on the table.

Firstly, the price level of 2006 appeared way lower than three years later, when the implementation module was given form. Secondly, the project area that was included measured 24 hectares, instead of the 40 hectares that were accounted for later on. Possibly, excluding the 'dry nature' was an error. Thirdly, water quality measures and its costs were not taken into account, perhaps because they had not been included yet, which increased the complexity of the design. Fourthly, the costs for the practical execution were not incorporated, which lead to an increase in costs. Altogether, it could be stated that even though a plan was written, it was not a realistic one, and the involved actors had to return to the bargaining table in order to decide upon the division of costs. A managerial meeting was organised on June the 30th, with the water board Regge & Dinkel, the municipality of Enschede and Hengelo and the province, to come to an agreement on the costs. This meeting was a crucial moment and an important process of interaction (Interview H. Arentsen).

Eventually, at the end of 2009 a notarial act - the so-called "financial ABCD construction" - was passed to arrange the land transfer:[24]

> *A. Enschede owned 14 hectares.*
>
> *B. The water board would buy Enschede's hectares. As they already owned 14 hectares, this equalled a total of 28 hectares.*
>
> *C. DLG (BBL) bought the 28 hectares from the water board, plus the 12 hectares of private property that they would acquire. This totalled 40 hectares*
>
> *D. The whole area of 40 hectares would then be sold to Environmental organisation Overijssel.*[25]

[23] Arentsen (Province of Overijssel), Wissink (DLG) and van Limbeek (Water board Regge & Dinkel)
[24] The ABCD structure was a financial calculation for the transfer of ground positions.
[25] The water board paid a reasonable amount to Enschede for the land to compensate for their loss. From there, the land was devalued and sold to the DLG with a great reduction in value. DLG was then shortly the owner of the 40 hectares; which was immediately sold to Environmental organisation Overijssel.

Analysis with Contextual Interaction Theory

Cognitions

In order to come to a viable division, all the interests and objectives of the involved parties were considered (Personal communication Herman Arentsen, 08-07-2016). By measuring the interests of an actor to continue this project and by defining the varying goals and interests, they were able to generate a financial oversight in which the contributions of the various parties were taken into account. The water board Regge & Dinkel took the lead and possessed the biggest interests in the water retention being realised. DLG had to adhere to the official competitive market rules, but they soon reached the peak as to what they could offer. The province was cooperating on the project as they saw the necessity of water storage and the link to their own nature goals. The alderman of the municipality of Enschede - in charge of the rural area - had a problem with 'selling the project' to his own backing, because the municipality had to give up the expensive land positions that were registered for industrial or recreational purposes. Ultimately, the head of the ground positions supported the construction, because he had changed his perspective and figured that he would not find a better deal.

Motivations

This stage was an important interaction process, as it involved shaping the actors, motivating them for the project and to determining the different objectives of the involved stakeholders. The actors needed to create a new budget which covered all the costs - one in which the different interests of the actors were expressed.

The negotiations in this meeting were complex, as the financial situation was not leaving a lot of space to find alternative solutions. Hengelo initially contributed a small amount of funding that had significantly increased with the new calculations. This was a hard pill to swallow for the alderman. Because of the listed and convincing pros and cons, however, the alderman acknowledged the interests of his municipality and decided that there was a point of no return (Personal communication Herman Arentsen, 08-07-2016). The plans were about to be implemented, and the municipality now saw the necessity of the project. They determined that they would be better off by subsidising the plan. The resources were – through a strong commitment of the alderman – made available and Hengelo was now motivated to tackle water problems and create a green buffer zone.

The municipality of Enschede had difficulties with the acquired land positions, as they did not only have to contribute to the implementation of the project, but would incur expenses on the devaluation of ground positions, as well. This was a sensitive matter; there was no motivation within the municipality to suffer such a great loss as they were holding on to the ‘original’ purchased value of

the land. The financial position of Enschede was mainly determined by the head of ground positions, who was advisor to the aldermen of finance. Within the municipality the involved alderman in the project needed to convince the economic planning team that there would not be a better offer and that the project would offer something recreational and of spatial quality (Personal communication Hans Koier, 05-07-2016). The economic planning team and the manager on ground positions, however, did not agree. The person necessary to convince was the head of the ground position team; He would carry the brunt of the "loss". This situation became an internal power struggle within the municipality. The planning team was certain that the circumstances would get better and that prices would rise with the years. The alderman of the rural area wanted a deal he considered reasonable - one he felt he could get away with in the municipal council.

The province did not want to compensate Enschede for the loss they would suffer on devaluating their grounds, and opined that the subsidies on grounds from the Water Framework Directive (KRW) should benefit all parties. Environmental organisation Overijssel, that would later become the area manager, supported the Province on the National Ecological Network. They believed it was convenient to do this jointly with the water board, seeing as they supported important water management interests (Personal communication Martien Knigge 12-07-2016).

Resources

The financial contribution that the different actors made grants insight in the role division of the process. Ground impairment of the municipality of Enschede was a difficult topic because the value of the land needed to be decreased. By downgrading the zoning to nature or water, it would decrease in value and, subsequently, the ground positions department would suffer losses where they were expecting to receive a return of investment. Firstly, there was no incentive within the municipality to devaluate; they held on to the 'original' purchased value of the land. Eventually, the value was decreased, but the decrease was calculated as 'costs' within the project. When the ABCD construction act passed, the landholding parties devaluated their grounds. As there were no grants provided for this by the province, the water board financially assisted the municipality of Enschede. The alderman could now keep his colleagues in ground positions satisfied. The water board had a comparable ground position. It was, however, registered for a lower value. In order to accommodate Enschede, the water board purchased the land for a reasonable price, by utilising the subsidy of the Water Framework Directive (KRW) on ground positions to compensate the municipality of Enschede, as a gesture of good will. Additionally, the municipality received a relatively large subsidy from the province for the development of the urban fringes, of which they could then benefit twice. The available subsidies and compensation encouraged the change in the municipality's perspective.

The water board had options to obtain subsidies for synergy and innovation from the Water Framework Directive and were inclined to use their own resources as well. The acquired subsidies could be used in order to convince the municipality of Enschede to participate. Without these subsidies, their bargaining position would have been poorer. The water board had already obtained some lands in an earlier stage, so these ground positions could be used within the land consolidation.

DLG did its utmost to assist in creating a beneficial financial structure to take over the landholding of Enschede. Originally, there were sheds on the territory of Enschede - though they were broken down already - but DLG compensated the deconstruction costs of the sheds. DLG put much effort in working this out, in order to keep Enschede satisfied so that the implementation of the project could proceed.

In the end, the area was sold to Environmental organisation Overijssel, who – as an area manager – received one hundred per cent subsidy on land positions from the central government's budget. Thus, the land was, due to subsidies, obtained costlessly by Environmental organisation Overijssel, in order to achieve nature conservation objectives. This was an important advantage for Environmental Organisation Overijssel. As a result of national policies they were able to play an important role in the process.

Boundary judgements within the interaction process

The sector dimension

In this interaction process, the actors' boundary judgements influenced the course of the project. Nevertheless, regarding the sector dimension of the domain, they collaborated closely to create a fitting and convincing estimate for the Kristalbad project. The staffs of the different actors were close and collaboratively produced a strategic plan that allowed the implementation module to succeed. Though the actors originated from different sectors, they created bridges to overcome the differences in policymaking. Of course, they could not surpass the available budget or neglect the relevant authority. In the solving of this problem, the civil servants of the water board, DLG and the Province shared a vision and agreed on the solution: by clearly stating the different interests of the actors and connecting a price tag to each of these aspects, an overview could be constructed that outlined the extent of their estimated roles in the project.

The scale dimension

On geographical scale, the Kristalbad project had not been completely developed yet. The reason for the area management of the Environmental organisation was that, in an emergency, there would be no need to communicate with various parties, but action could be taken directly. The boundaries of

the project depended on the success of the land consolidation done by DLG. In order to determine the borders of the project, the boundary judgements of Enschede needed to be loosened, as they initially did not want the project to take up too much land; the municipality had a divergent boundary judgement regarding geographical scale. This made attaining convergence within the project difficult. Although the municipality of Enschede had originally not been very flexible, this position was understandable; they had the biggest landholding within the area and needed to devaluate the land in order to benefit the project. Their intentions were twofold; they had invested in the area, but were afraid to suffer losses due to this project.

On the administrative level, the three parties that joined forces to advance a plan of action carried the project: the water board, DLG and the province. They lifted the project from a local water problem to a more regional level in which the nature conservation organisation and the subsidies from the central government could be utilised. By using the land re-ordering committee as an instrument to carry out this project, the existing governance structures could still be wielded. This led to the representatives of the involved actors wanting to 'shine' with the project. This gave the project a motivational boost.

The temporal dimension

In this interaction process, there existed different boundary judgements of the involved actors regarding time. As discussed, the municipality of Enschede had land holding in the intermediate area, which they did not want to 'give up' unless they received a suitable price for it. The planning team of the municipality wanted to hold on to the lands until the economy would recover. This 'waiting it out' strategy was applied for a while – affecting the time horizon of the Kristalbad project. It was eventually abandoned, as time proved to work against it. The boundary judgements within the temporal dimension were converged by including the Kristalbad project in the land re-ordering committee where all of the actors were involved. This effectuated a clearer time horizon for the project. At the same time, the agreements made within the managerial agreement imposed a short time span on the project regarding its realisation. This put pressure on the involved actors, and required swiftness in fulfilling their appointed tasks. Because of the subsidies' deadlines, time pressure was high; Realisation of the project depended on the obtained funding.

IV. Water board Regge & Dinkel taking the lead

One of the water boards' project leaders had been trying to arrange the retention base since the late nineties. The project started off slowly, because the municipalities of Enschede and Hengelo were not yet decided on the plans for the intermediate area. The ground was zoned for industrial expansion or

recreation. When the land re-ordering committee was set up, different objectives were taken into account and the preparatory committee weighed the different interests of the actors. Within the water board, the same project leader continued its work on the Kristalbad project while the land re-ordering committee was established. Due to internal changes within the water board a new project leader was appointed in 2008. In the implementation committee it was decided that the water board would be in charge of the organisation and implementation of the project. The water board was keen on taking the lead in the planning processes, as the Kristalbad project was mainly focused on water (Waterbeheerplan Waterschap Regge en Dinkel 2010 > 2015). Accordingly, the incumbent water board project leader received an important job; He had to take the lead whilst the project had been muddling through for some time. During the project, he took some bold decisions in order to boost the project and decided that it needed to become a success. When he started working on the Kristalbad project, there was tension within the project team and people were not turning up at meetings. Within the process of the project, different sub teams were established in order to make things run more smoothly. The combination of ground acquisition by DLG and implementation done by water board Regge & Dinkel proved to be not complicated and more oversight was needed.

Analysis with Contextual Interaction Theory

Cognitions

Water board Regge & Dinkel was specialised in water tasks and was regarded as the water expert of the public sector. In water tasks the water board endeavoured to adopt a comprehensive approach involving recreational, scenic and cultural aspects. In 2013 a third project leader, who focused on the implementation and finalisation of the project in its last phase, succeeded the project leader. As a public authority, water boards claim to be transparent and communicative organisations (Waterbeheerplan Waterschap Regge en Dinkel 2010 > 2015). This emphasises the need to include the water tasks in the final project. At the same time, the water board took the risk; they were responsible for the money-flow. By getting rid of the old design for the intermediate area, all the initial plans were swept off the table and new negotiations were started. The design was changed from ’standard water retention’ with ‘token bushes and trees’ into an outstanding and renewing combination of water retention/purification, nature and recreation (Personal communication Jan Rikus van Limbeek, 24-05-2016). Herein, the water board shifted from a ‘standard’ retention to an ‘exiting project’. The water board’s perspective was changed. It was not seen as a ‘special’ project, until over time their vision had changed. Because of contextual water management, a comprehensive project created a new perspective.

Motivations

The water board was motivated to take the lead in this project because they were eligible to request subsidies related to water issues. The Water Framework Directive (KRW) encouraged cooperation between the water boards and water managers. The water board Regge & Dinkel wanted to deal with the storm water in a responsible way and was therefore looking for solutions regarding water retention and purification. The motivations of the other parties were triggered, as there was 'something in there' for them as well. During the course of the project, the different actors were encouraged and became more eager to be involved: the project was now getting somewhere. The idea was not to create nature, but to create something new. Within the different project groups, team members from different organisations were motivated to realise the maximum potential. Hence, the project was catching a wave, but 'joint motivation' - when actors are motivated for each other's purpose -, did not take place.

Resources

The capability to take the lead and steer a project depends on whether there are resources in the lead organisation to perform such tasks. The water board assumed this role and the project leader was fully focused on making this project a success. Due to a broad administrative organisation, the water board was well informed about the rules and possibilities regarding subsidies. Including the water quality in the design, through adding a wetland, was an innovative way to cleanse the overflow and receive funds for the project. Under the influence of light, air and the aquatic vegetation the wetland has a cleansing effect on the water by breaking down and converting substances. By possessing the know-how and having the capacity to apply for subsidies, funding for the project could be realised. This was an important asset within the project context. The financial 'resources' were doubled because the project could attract different subsidies. The water board had these qualities and they were recognised by its partners.

The acquiring of subsidies was a significant tipping point in the Kristalbad project. In the best possible scenario, the subsidies would have meant grand financial support for the project, though at the same time it would put the project under strict time pressure. In the worst-case scenario the subsidies would not or just partly be granted, due to delay. This would then suggest extra costs for the water board, as they were the party assuming the risk. Nevertheless, the subsidies played an important role in the project; without them, the costs would not have been bearable. Deciding to apply for subsidies engendered a positive atmosphere in the project team. It appeared to be a way to increase enthusiasm for the project and to boost the confidence of all actors (Personal communication Rolf te Velde, 24-05-2016). By taking a delicate decision, the water board created an opportunity

towards the realisation of an integral project. The fact that nature organisations received a 100% subsidy on the acquired ground positions, at that time, made them a very interesting partner to work with. As there were difficulties with the attainment of lots, this was a great resource for the nature organisation.

Boundary judgements within the interaction process

The sector dimension

At the start, the land consolidation pillar was not connected to the Kristalbad project, but an independent pillar of the land re-ordering committee. In the land acquisition team, the direct connection with management was key as it provided trust and guidance. Much attention was paid to the managing of the surroundings. This occurred at different levels and the main stakeholders were integrally involved in the project. The neighbourhood and neighbours were informed at an early stage and were involved in the project. They were also taken into account during the preparation and execution of the project. This had a positive effect. The communication with the landowners, however, proved to be more difficult. Due to high ground prices in the past, their expectations were similarly large. After intensive consultation a solution was found in which all land was ultimately bought on amicable terms. Only one farm proved an exception; it was eventually left completely out of the plan.

The scale dimension

The Kristalbad functions as a permanent green buffer between Hengelo and Enschede. It makes the entire project area work as ecological corridor connecting two nature zones that are situated in the North and South. The water storage system of the Kristalbad consists of compartments that are alternately filled, drained and emptied. The area was integrated within the land re-ordering of Enschede North, though only a small part of the Kristalbad could be considered ‘dry’ nature. Environmental organisation Overijssel became the area manager and owner of the entire area. All parties agreed on this (Personal communication Martien Knigge 12-07-2016).

The provincial government decided that the intermediate zone would be used for nature, as it was included within the National Ecological Network (EHS). And so, the municipality had to change the zoning plan concerning the points that were given a different purpose (Toelichting Bestemmingsplan, 2013). The Environmental organisation Overijssel was involved in the project, but assisting from the side-lines. They did have their own purposed within the project, but they say that their objectives were met within the process. Environmental organisation Overijssel operated mainly as the area manager.

The temporal dimension

There was some tension between the project leaders and the DLG, as the organisation proved too slow for the project and its timespan. In order to combine the deadlines of the implementation with the objectives of DLG, the water board's project leader of the Kristalbad installed a special land acquisition team (Personal communication Rolf te Velde, 24-05-2016). In this team all of the included parties were represented and this aroused a feeling of shared responsibility. This was the crucial moment and tipping point when considering ground positions, seeing as the stagnation was causing a delay and was obstructional to the project's execution.

The project was dependent on different subsidies for its realisation, and so the timing was an important matter; certain goals needed to be achieved in order to be eligible for the grant. Adjustment of the zoning and land acquisition required effort and time, which caused a lot of tension in the project. It was necessary to achieve the results within the prescribed amount of time.

Contextual Interaction Theory analysis

In spatial development projects, several policy sectors have their inputs in a process, each of them related to various spatial scales. The actors, through interaction, figure out which of those scales are involved. By involving multiple sectors extra complexity is added due to multiple governance contexts. Following the Contextual Interaction Theory, there is a mutual influence between the core characteristics of the actors within interaction processes, while they are externally influenced by their context as well (Bressers and de Boer, 2013: 80). The involved actors provide input to the interaction process, but the project itself can affect the context as well. The – at that moment – relevant policies, sectors and scales are not immovable, but subject to change. These inputs are also somehow dependent on the boundary judgments of the various actors within the process. The project also influences its context; involved actors have judgements on what is involved – or what should be involved – within a project. Therefore, the arrows point both ways.

The interaction processes were differentiated in a way that resembles the most important interests and tensions within a project. This can be regarded as a chain perspective in which the process is described. It provides insight in the boundaries of the different actors, where boundary spanning was practised. In an integrative way of analysing the Kristalbad project, within the involved interaction processes various sectors, scales or time horizons are combined to get a grip on how the actors operated (Bressers and de Boer 2013: 88). The collaboration that takes place within the interaction arena modified the cognitions, motivations and resources of actors. Hence, the interaction processes are significant aspects of the project's process, as the actions of the actors resemble their – at that time – strategies for dealing with complexity (Bressers and de Boer, 2013: 88). As the

Contextual Interaction Theory explains, there are influences from the outer contexts on the specific context and on the interaction processes, as well. 'Project development' changed over time and needed to be in line with the paradigm of Integrated Water management that was promoted by the Ministry. The aim was to develop spatial projects together with experts from several disciplines and sectors, in which diverse stakeholders would be represented. With this mind-set, the Kristalbad was no longer developed 'in isolation' or by only focusing on water goals; other relevant stakes needed to be integrated within this project, too.

4.4 Reflecting on the interaction processes

This section will conclude on how the interaction processes were sequentially related and on how boundary judgements changed during the course of the project. The key (altered) actor characteristics are displayed on the next page (fig. 18) and can be linked to the modified boundary judgements. By making a table of the three core characteristics and the boundary judgements, the four (I,II,III & IV) described interaction processes will schematically be delineated and explain generally which transformations have taken place in the interaction processes. The given view could be considered an abstracted explanation of how the different interaction processes succeeded one another. Additionally, it will convey which changes were successful in bringing the process to the next phase.

Figure 18 Table with core characteristics and boundary judgements of the interaction processes

	Cognitions	Motivations	Resources	Boundary judgements
I	❖ Water board focused mainly on own sector and objectives to realise water retention.	❖ The motivations of the other actors were to maintaining a strong land holding in the intermediate area without supporting water retention.	❖ Water board could not finance the project as it was initially planned.	❖ By broadening the sectoral dimension to recreation and nature, other actors' perspectives were welcomed within the project.
II	❖ The water board held a perspective that consisted of the search for interlinking the water board's aims and the values that society and the environment grant to water. In this, other actors' objectives were taken into account as well.	❖ Due to the possibility of realising own goals within the Kristalbad project, other actors were reasonably motivated to explore the options of a multi-functional project.	❖ Thanks to broadening the content of the project, multiple subsidies were eligible which led to the feasibility of the water board's plans. This, in turn, motivated the other actors to interact.	❖ The land re-ordering committee elevated the project to a higher administrative scale, where the stakeholders interacted. ❖ By broadening the content, sectoral boundaries were spanned, taking away the doubt of interference.
III	❖ The expensive land positions of Enschede, registered for industrial or recreational purposes, created a difficult bargaining position within this interaction process.	❖ The different objectives of the involved stakeholders were known, but in this interaction process they were linked to their financial and organisational parts of the project.	❖ With passing the ABCD construction act, the landholding parties devaluated their grounds. As there were no grants provided for this by the province, the water board financially assisted the municipality of Enschede.	❖ The employees of the water board, DLG and the Province agreed on the financial problem; by clearly stating the various interests of the actors and connecting a price tag to each of these aspects. An overview could be constructed that outlined the extent of their estimated roles in the project.
IV	❖ The project design was changed from 'standard water retention' into an outstanding and renewing combination of water retention/purification, nature and recreation	❖ Within the different project groups, team members from the various organisations were motivated to realise the maximum potential; the idea was not to create nature, but to create something new.	❖ Due to a broad administrative organisation, the water board was well informed. By possessing the know-how and having the capacity to apply for subsidies, funding for the project could be realised.	❖ Stagnation in obtaining the land position caused a delay in the project's execution. In a joint landholding team the relevant parties teamed up and worked together, which created a feeling of shared responsibility.

I. The initial planning of water retention in the intermediate area

II. Multi-lateral alignment: land re-ordering committee as an organisational vehicle

III. Division of costs: managerial meeting June 30th, 2009

IV. Water board Regge & Dinkel taking the lead

4.5 Reflecting on boundary judgements

Boundary judgements as part of actors' cognitive system played an essential role in the interaction processes. The boundaries of a domain are related to three main dimensions that were used to delineate the boundaries and to describe the Kristalbad project: the scale-, sector- dimensions, and time dimensions. The cognitions of a stakeholder play an important role in boundary judgements. The boundary judgements have to be sufficiently flexible and open to finalise the project in a fruitful manner. Boundary judgements belong to the category of cognitions, but can also be modified by new cognitions themselves (Bressers and Lulofs, 2010). By exposing the various actors to the possibility of collaboration within a multifunctional project, cognitions of the actors were slightly influenced. As earlier attempts of cooperation on water retention did not prove valuable for the municipalities other than flood prevention, the project was brushed off. By convincing the other actors of the opportunities – and by minimising the negative (financial) aspects – their boundary judgements became more flexible. Here, boundary spanning done by the water board meant widening its own boundary judgements on water retention, by looking at the objectives of the other actors within the intermediate area. The water board could expand the water goals by promoting them within nature conservation plans of the Province and, additionally, by connecting them to the municipality's plans on recreational purposes.

Boundary judgements form a small, but vital part of cognitions and are assumed to affect the process (Bressers and Lulofs, 2010). Within the interaction processes of the Kristalbad project, the actors' experiences brought in new information that effected the boundary judgements of the actors. Changing cognitions impacted the motivation of the actors within the interaction processes. When the chances to realise existing goals emerged, depending on the acceptance of extended domain specification, they become more amenable towards extended or adjusted boundary judgements. Resources can influence cognitions both directly and indirectly, via motivation. By broadening the project, the available resources changed. This had an impact on the cognitions of the actors regarding collaboration within the intermediate area. The resources did not change by themselves; they were influenced by the wider contexts (e.g., WB21, WFD). In this project, resources were intentionally deployed to motivate the partners and to influence sectoral boundary judgements. Resources were used to enhance the positive experiences within the interaction processes and to increase the chance of more openness towards the regarded domain.

Chapter 5. Boundary spanning activities to managing complexity

5.1 Introduction

The way domain boundaries are perceived explains an actor's position within a multi-faceted project. By describing the core characteristics of the actors - as revealed within the interaction processes - and zooming in on the perceived boundary judgements of the actors, the process of the Kristalbad project as a domain was established. The boundary judgements of the relevant actors during the decisive moments of the Kristalbad project were clarified in chapter 4. In this chapter we will reflect on the described interaction processes of the prior chapter in order to determine boundary-spanning activities. The central research question will be answered:

What were the boundary spanning activities within the Kristalbad project that influenced/contributed to the course of the process/project?

First of all, the boundary spanning activities within the Kristalbad project will be elaborated upon by categorising them in three different dimensions, as defined within the Contextual Interaction Theory: sectors, scales and time. Secondly, in order to be able to fully respond to the central question, the obtained information gathered by answering the earlier research questions will be combined. We will reflect on the specific context and analysis of the boundary judgements in the various interaction processes. This will provide closure on the role of boundary spanning strategies in the process and help us draw conclusions on the influence boundary spanning had on the course of the Kristalbad project.

5.2 On coupling strategies

In this section the different types of linkages, henceforth used for coupling strategies synonymously, will be discussed. The coupling strategies will be emphasised, in order to determine the boundary spanning strategies that were employed to influence the boundary judgements of other actors, during the course of the Kristalbad project. Three different dimensions of boundary spanning strategies will be extricated in which the linkages will be placed and discussed: coupling on sector, coupling on scale and coupling on time. Each schematically displayed table will be elaborated on within the written explanation. The Latin numbers that are marked within the 'interaction process' boxes refer to the interaction process in which this coupling activity was presented.

Coupling within the sector dimension	Interaction process
➢ By, eventually, introducing new actors to the game, new information (objectives and restrictions) was brought in.	I
➢ By promoting the water retention plans of the water board within the land re-ordering committee, the project was broadened and the sectors that it covered (and their agendas) opened up.	II
➢ Combining different goals increased complexity, but caused the actors to be more involved in realising their own goals. The water board steered towards a multifunctional project, as they realised that the own objective could not be achieved without involving other stakeholders' objectives.	III
➢ Convergence-oriented cooperation was aimed on among the key actors (Province and water board). Financial resources were combined, as this appeared beneficial to all of the parties. Compromises were made by adapting boundary judgements and taking a more receptive stance.	II
➢ The Kristalbad story included 'different' priorities for various audiences. The water retention task was reframed by promoting it more as a multi-functional ecological corridor (contributing to spatial quality).	III
➢ The water board aimed for spatial quality with the project instead of realising standard water retention (up scaling the project in sectors). Collaborating generated added value and integrated thinking.	IV
➢ The water board decided that the project would not be a standard constructed water storage pond, but a wetland.[26] Coupling water quality to the plans of water retention was a pioneering move that showcased flexibility.[27] By gaining hydrological information from Sweden, a foreign system was consulted. One that broadened the view of the project to enhance innovation.	IV

5.2.1 Boundary spanning on sector dimension

Some of the water board's objectives could be expressed through different land use functions where the other stakeholders' objectives could not. These plans, e.g. on nature conservation, recreation and an ecological corridor for flora and fauna, could not only be combined within one project, but created extra resources for the realisation of the water boards initial goals, as well. By adding complexity, the water board eventually made it 'easier' to realise their objectives. Widening the boundary judgements on sectors within the project can be considered a boundary spanning strategy, which was realised through a widening of the boundary judgements in the sector dimension. By influencing the actor's motivation to broaden boundaries through convincing them with (obtained) resources, the boundary

[26] The water board deemed what was being done to be 'innovative'. Wetlands were 'hot' in terms of water quality, as there was discussion in the Parliament that more wetlands had to be created to improve water quality.

[27] …in order to improve the effluent streaming through the brooks of Hengelo. In this, the water board proved itself to be a competent coupler; this strategic manoeuvre led to the completion of the budget for the Kristalbad project.

judgements of the involved actors became more widened and the actor turn out to be more willing to cooperate.

The water board's vision on Contextual Water Management, water governance and collaboration had an impact on the Kristalbad project. The aim of the water board was to develop a multi-purpose plan for the intermediate area by integrating various perspectives. For this, new combinations of scales, actors, perspectives, strategies, and resources were required, which generated an open atmosphere and transcended different sectors (Bressers and Kuks, 2004).

The creation of wetlands was a goal in nature policy, while at the same time it could contribute to the target of creating more water retention capacity. By combining resources, the other actors' motivation was raised, as there was initially a resource dependency that made their own objectives within the domain uncertain. Resources and influence were strengthening the motivations of the actors, as the obligations arising from the Water Framework Directive (KRW) were balanced by subsidy schemes. Adding to this the recreational developments, nature conservation goals and spatial quality within the water projects, the Kristalbad project became more attractive. By including different aspects, the project turned out to be more affordable due to combined resources and subsidies. Thus, boundary spanning was done by attracting different actors and granting them (accessible) resources for the implementation of the project. On top of that, one of the available subsidies was a WFD (KRW) subsidy on synergy, which could be collected by cooperating with a large number of different actors in different (public) sectors.

By regularly communicating with the other partners the water board was retaining close ties. Expectations gradually rose during the project, which created more confidence and input to make it happen. For a project to be successful, collaboration is needed when complexity increases. Hence, within collaborative processes, it is not only the institutional arrangements, but also the passionate and committed partners that are crucial. Opportunities for collaboration and the coupling of resources created a mutual understanding within the network. Incrementally, thanks to the experiences had during the project, a joint source of trust was developed. One of the strengths of the Kristalbad project – as mentioned by multiple interviewees – was that the partners were pleased with the collaboration that benefitted their own objectives; they used the project to flaunt. This could be considered an important reference to the enthusiasm of the actors and their willingness to bring the project to a good end. At the same time, it could be considered a point of no return: by expressing their enthusiasm for this project, it was difficult to abandon it later on.

Boundaries of policy fields were crossed: the water board proposed a combination of water safety, nature conservation and spatial planning. Water quality, through an innovative water machine,

was added when the project was already off the ground, but needed specific content that would cover the innovative character the project ought to have in order to be eligible for the WFD subsidy. Recreational purposes were included in the project as the municipalities of Enschede and Hengelo presented these aspects as their goals. The spatial planning of the area did no longer belong to the jurisdiction of one political authority, but to a number of authorities that were dependent on each other. Joint decision-making was required. Herein, a sectoral boundary was spanned, as regional stakeholders were obliged to collaborate in order to reach all the intended goals.

Coupling within the scale dimension	Interaction process
➢ The water board first focussed solely on water retention, but when more goals were added the geographical scale expanded. The area to be used widened, which required coupling strategies[28] to convince the stakeholders that the geographical scale needed to be increased, as well.	I
➢ The land re-ordering committee as an administrative vehicle allowed the partners to communicate within a governance structure and brought the different actors together as a network coalition. The content of the plan for the intermediate area did not change, but up scaling the level of administration was a rather process-oriented move.	II
➢ The preparatory work was done on the administrative level, but official agreements were made in the managerial context. This provided clarity for the various employees, which made the cooperation clear and organised.	III
➢ Administrative scales were beneficially employed to illustrate the importance of the project. E.g., local authorities did not propose the process of expropriation of private land, but the Province of Overijssel requested the Royal Decree on expropriation from the national government.	II
➢ In order to make the project acceptable for the Province, it 'zoomed in' on the water problems within the area instead of on the ecological corridor as a whole. This was a way to put aside the political sensitivity on expropriating for nature goals, and redirected the focus to water safety (while nature would still be included).[29]	II
➢ The Kristalbad's wetland plans grew into an innovative Swedish design and generated new resources by attracting European subsidies, as the project was now eligible for subsidy requests for the WFD funding on innovation (design) and synergy (to achieve the WFD objectives faster).	III

[28] This was accomplished by including the stakeholders in the project and listening to their needs, and compensating where needed.

[29] The importance to expropriate because of water safety was a crucial event in the project. The delegate of the province was not allowed to use the expropriation tool for nature purposes, as in the regional plans it was stated that the province would only support 'voluntary nature'[29]. (Streekplan 2000+).
It was necessary to gain support from the Province of Overijssel, as their consent and effectuation of expropriation weighed more than the will of the municipalities or the water board. There were multiple ways of obtaining legal instruments for expropriation of land; the water board is allowed to expropriate in urgent water matters. Additionally, municipalities can acquire land by means of expropriation proceedings (Interview S. Kuks).

5.2.2 Boundary spanning on the scale dimension

Coupling thrives within an organisation where employees feel trusted and where they have a clear mandate. This makes it easier for an appointed employee to take action. The Executive council of the water board provided support and granted authority to the project leader in order to make the project into something special. The Executive council strongly aspired to make the project succeed, as it embodied their vision on Contextual Water Management. It became a priority on their agendas. By showing managerial interest, the project leader felt supported. Simultaneously, pressure was put on the project, as well (Personal communication Rolf te Velde, 24-05-2016). Internally, within the water board, coupling activities were undertaken that influenced the collaboration on different scales. By employing swift internal communications between the board member in charge of the account and the project leader, an efficient coupling was realised.

There is a difference between cooperation on the administrative level and on the representative (managerial) level. For both the civil servants and representatives, it was important to maintain a good relationship with their partners. Nevertheless, representative delegates supported the ambitious project in order to get rewarded for the success during the election season. Likewise, projects can be rejected to prevent a possible tarnishing of an incumbent representative's track record. This occurred in the municipality of Enschede's economic planning team, where the manager of the ground positions did not want to incur large financial losses during his term (personal communication, H. Koier). Managerial conviction and persuasiveness were needed, as well as distributing available resources, in order to push the project forward. Once the project was incorporated in the land re-ordering committee - and once all of the different actors were gathered - the project could be 'rolled out'. However, plenty of hurdles still had to be taken in order to make it to the finish.

By making use of European, National and Provincial subsidies, the project became relevant on different scales. For the subsidy applications it was important to perceive the project from different angles. This contributed to the idea of focussing on water quality and linking internal knowledge with external networks. In this aspect, the water board appeared a flexible actor, as it broadened its boundary judgements on the sector dimension by utilising important knowledge from abroad. This judgement was triggered by the possibility of aiming for a higher grant, provided by the Water Framework Directive. Herein, the motivation generated by available resources was a pull factor to integrate water quality into the project and adding to it an innovative water machine with imported foreign expertise. During the project the different stakeholders noticed that it was well received. It subsequently became a flagship project for each of the actors (all with their own motives).

Geographic scales were spanned as the planned water retention within the designated Ecological Corridor (EHS) led to a widening of the nature area. Primarily, the municipalities wanted to reduce the width of the Eco zone in order to decrease the amount of ground that would be used, as the municipality of Enschede was struggling with the expensive ground positions. Geographic boundaries were combined where water and nature objectives merged. Water retention was initiated to lower the volume of effluent running towards downstream Hengelo from STP in Enschede. The nature goal involved connecting the nature areas of Twekkelo and Driene - North and South - while crossing three hurdles (road, railway and the Twente canal).

Coupling within the temporal dimension	Interaction process
➢ No momentum was extant in the nineties, and so the water retention plans of the water board had been ineffectual. By establishing the land re-ordering committee, momentum was seized. Once the policy (WB21[30]), grants (WFD synergy and innovation) and social interests (against flooding) changed, a window of opportunity was presented in which this project could be realised.	I
➢ Internally, through the water board 's programming, the process was strategically sped up in order to be eligible for the necessary funding.	II
➢ A first design for the Kristalbad project was considered out-dated and inadequate for the area. A more distinctive plan that accommodated future problems, innovative policy and politics of that moment was developed.	II
➢ When the project's funding was finalised, its implementation needed to be accelerated. Taking calculated risks by utilising unfinished procedures and by realising parts of the project while not everything was ensured increased speed.	IV
➢ There was a point of no return once the implementation module was agreed upon: the negotiations were too far advanced for the actors to 'retreat'. Agreements were signed and financial compromises were made. This anchored the project, though the water board carried most of the responsibility regarding time management.	III & IV
➢ The subsidies the WFD granted to the water board triggered a strict time frame. The water board now had deadlines to make, which made them urge the other actors to fulfil their tasks, e.g. the land acquisition or the planning permission from the municipality that was not easily forthcoming.	III

5.2.3 Boundary spanning on the temporal dimension

The Kristalbad was a medium/long term project and throughout the years the political landscape changed, which eventually made it possible to enforce the project. Over time, new information became available on climate change and the impact this would have on precipitation within the region. Due to European and national policy, measures had to be taken to accommodate this increase. At the

[30] The report of the 21st century Water management committee (WB21) imposed policy wherein water needs more space.

same time, the quality of water within the system would be improved. The 21st century Water management committee (WB21) imposed policy changes wherein water would need more space. The different problem, policy and politics 'streams' came together as a consequence of these new perspectives on water management and of the water board's cognitions, motivations and resources. The national government's vision on water management had changed and nationwide the perspective on water management demanded spatial projects to integrate in other sectors.[31] Within water board Regge & Dinkel, 'Contextual Water Management' was designed in the Twents water compass. The Kristalbad project appeared a good example of this vision on water management (Personal communication Pietvan de Erp, 28-07-2016). The fact that the land positions over the years devaluated created momentum upon which was to be acted. This contributed positively to the project, though it did not reduce the negotiating position of the municipality of Enschede.

The 'game of subsidies' created a difficult framework of deadlines, to which the water board had to adhere. They did their utmost to manage the deadlines that were created by various subsidy applications and were forced to start with the implementation of the first phase even before all of the land had been procured (Personal communication Pietvan de Erp, 28-07-2016). This put pressure on the project, as no deal had yet been made with the last private owners. The project was being executed in order to maintain a firm grip on the subsidies.

Temporal boundaries covered the long-term perspective of the water board, which was to avoid a future reoccurrence of flooding in Hengelo. On the temporal boundary, pressure on the short-term originated from the ministry and WFD (EU) regarding execution of the project. The behaviour of the water board concerning its position in boundary spanning activities could be seen as an incremental change. The public organisation was discovering its possibilities in boundary work and tentatively sensing where boundary judgements were divergent, and finding out whether the recipient was benevolent towards dismantling boundaries or looking for opportunities.

Internally, within the water board, programming appeared to be a great opportunity to prioritise the specific needs within a project's funding. Herein, timing was an important asset: it was crucial to not be too late, nor too early. In the Kristalbad project, an important question was how to bring (and hold) the project to the agendas of stakeholders. This aspect can dominate the agenda setting of representatives, and have external influence on the temporal dimension of a project.

Phasing boundaries were interpreted differently: the implementation of the 1st phase of the project started before total land acquisition was finished. The water board and DLG agreed on strict

[31] Water management changed from Technical Water Management to Integrated Water Management, to Integrated Water Resources Management.

deadlines regarding the land consolidation, as the subsidy arrangement demanded hard deadlines. Due to a well-maintained relationship with the subsidy provider – established through clear communication and relevant 'linkaging' – there was some flexibility in the measures to be taken, and the deadlines did not appear so strict.

5.3 Conclusion on boundary spanning within the Kristalbad project

To answer the central research question, the information gathered through the different sub questions will be bundled. This will conclude the study. In order to answer the central research question satisfactorily, a broader and more strategic level will be taken.

The Kristalbad project can be regarded as a wide domain; it eventually encompassed several (policy) sectors that are considered domains on their own. While the Kristalbad started off as a water management task, it ended up including nature policy, recreational policy and land re-development. Multiple sectors were involved in the planning process in order to create public support for the plans.

The location of the Kristalbad project was developed within the intermediate area between Enschede and Hengelo. Its geographical location was determined by the altitude of the ground (higher than Hengelo but lower than Enschede) and the connections to the downstream brooks. The intermediate area was an ideal location for an innovative project; people could walk from the train straight into the area (Personal communication Pietvan de Erp, 28-07-2016). But the administrative scales of the relevant actors that were involved covered, together with the development of the project, more than one scale. The Kristalbad could be considered a local project, but formed also a part of regional policy. Additionally, it adhered to national policy regarding the ecological infrastructure of nature areas, while, simultaneously, it was being adapted to conform to the European policy on the Water Framework Directive.

The Kristalbad project was established over a limited time period, but had a relatively long time span when counted from the moment the initial plans of the water board to enlarge the water storage were set up. The Kristalbad project had an unsure commencement, and once it was included within the land re-ordering plans it was continuously challenged subsidy deadlines. Within the project the various partners had their own perception of time due to the divided tasks amongst them, although the land re-ordering committee as an organisational instrument bound the different parties together.

Boundary spanning enables the actors to handle extended complexity; it could be characterised as mobilising resources and connecting problems to solutions in the search for a

successful outcome. This is exemplified in the Kristalbad project (Bressers and de Boer, 2013: 48). Often, in a medium or long-term process like the Kristalbad, the result influences the process itself. The result was an accumulation of goals that were defined in the beginning. The thoughts of actors, although they were ill-defined at the start, produced input in the process. Gradually, plans were solidified when realisation of the project came increasingly close. This echoes the cognitions, motivations and resources of the actors, which gave the project's progress a positive boost. Illustrative of this boost is the behaviour of the civil servants attending the scheduled meetings for the Kristalbad project. Where initially people were sceptical about their presence at and the relevance of the meeting, later on in the process they would not miss out on a single meeting.

5.3.1 Receptivity of the actors

As assumed within the Contextual Interaction Theory, the three actor characteristics and their aspects influence the process and context. In return, they can be influenced by numerous other factors from within or outside of the process. When an actor's boundary judgements are adaptive, this can be labelled as receptiveness. This could be seen as an explanatory concept, which defines the position of an actor towards an adaptive setting. The concept of receptivity refers to the ability of actors to combine new information with existing cognitions so that they can recognise new goals to match their existing motivations – or the values behind them. Receptivity is closely linked to boundary judgements and – as both of them are elements of cognitions (Lulofs and Bressers, 2010).

The function of receptivity in the Kristalbad project as a whole also refers to the receptivity of the set of actors as a (cooperative) network (Bressers and Lulofs, 2010: 31). When the motivation among actors is positive, it creates a willingness towards new boundary specifications and will increase receptiveness. But when motivation is negative, it can cause barriers and blockages in the project. An overall view of the Kristalbad project can be explained by perceiving the involved actors as a network in which the role of receptivity within the process is connected to the receptivity of the actors as a group. Additionally, it allows them to recognise the opportunities inherent in new resources, or combinations with existing resources to optimise their capacity and power (De Boer and Bressers, 2011). Receptiveness could be found in the observations and boundary judgements of what (does not) belong(s) to the subject of the process at stake, the interpretations of reality and the impacts on motivation, capacity and the process itself (Bressers and de Boer, 2013: 49). Within the coupling in the project that was illustrated, the character of the actors and their openness can be considered key. Although the spans were merely short-time measures, they were positively received by the actors within the arena. The project brought the actors close together through collaboration, although this did not directly guarantee further boundary spanning within future projects, it created goodwill.

Conclusion

The Kristalbad was studied from a research perspective based on the Contextual Interaction Theory's model and supported by theory on coupling strategies, boundary judgements and boundary spanning. The Contextual Interaction Theory was used as a lens to analyse the interaction processes among the actors in the Kristalbad project. Once having formulated the different motivations, resources and cognitions within the interaction processes, the focus lay on the cognitions of the different actors and the boundary judgements that formed part of the cognitions within the Kristalbad project. Within the project the water board's vision of Contextual Water Management reconstructed the pattern of how boundary spanning and linkages could be used to get to the solution of a water challenge. This was accomplished by getting the right actors to take a seat at the negation table in order to create a comprehensive plan for the intermediate area between Hengelo and Enschede.

This study implies that water managers need to combine multiple fields of interests to complete certain projects. As mono-functional projects without local support from stakeholders regularly prove out-dated, water managers often need to find participation among municipalities, regional economic development, natural values, water safety and water quality. To inaugurate such a collaboration requires bargaining and cooperation with actors in other policy areas, such as spatial planning and local and regional economic development. Integrating multiple water policy goals demands a degree of participation outside of the own organisation, but within a network. Subsequently, internal knowledge and networks will be coupled to external sources of information. From the case study, as the interviewees asserted, it follows that it is efficient to look for shifting boundary judgements in the primary phase of the project when all the cards are still on the table. If the boundaries are clarified and the other parties are aware of the flexibility of their fellow actors and their core characteristics, the boundary spanner can verify whether these boundary judgements are divergent and whether the actor is willing to be receptive. Herein, the exchange of information between the organisation and its environment appeared to be an important link. In the Kristalbad project, objectives from the involved stakeholders (external organisations) were to be accommodated within the water board's project plan. The organisation's openness enlarged the playing field, which created opportunities for further engagement. The only threat there was that the water board would be too open in its 'spans', and would become too compliant with the other parties. Nevertheless, obstinate behaviour would not have helped the water board in its delicate position. By spanning boundaries in sectors (looking within spatial management to possibilities other than water retentions) and by attaining a determined position regarding the geographical scale of the water storage (enforcing boundaries), the temporal dimension could eventually be used as a pressure method to

enforce change, to keep the project high on the agendas and to complete the project within the agreed upon time frame. While aligning the requirements of the stakeholders, spans were made that resulted in compromises and cooperation.

In hindsight, it can be said that the water board acted as an agent of change that accurately coupled perceived problems to accessible solutions by opening up to other parties and their objectives. This engendered widespread support. Due to the receptivity of the water board, boundaries of the water domain could be spanned over the sectoral dimension, scale dimension and temporal dimension. This proved a flexible and complementary approach. In the Kristalbad project, boundary spanning was used as a strategy to arrive at organisational goals whilst dealing with complexity. The project validates that pragmatic boundary crossing strategies enable an inter-organisational synchronisation that can contribute to the individual goals that are out of reach for singular organisations.

Discussion

In this thesis the Contextual Interaction Theory functioned as theoretical framework. It was applicable, due to its focus on interaction processes whilst taking different contexts, actors and their characteristics into account. It proved to be a broad theoretical framework, as different components could be elaborated upon. This resulted in the research being more weighty than originally intended. The elements of the CIT proved to be relevant, as the specific context could be deployed to give an in depth description of the case study. Additionally, the CIT could be used to analyse the core characteristics within the interaction processes, which made it possible to explore the boundary judgements of the actors. This is not considered to be the standard approach within CIT, but zooming in on boundary judgements (as part of an actor's cognition) was of great value in this study on boundary spanning strategies.

The role and behaviour of the partnerships could provide an interesting topic for further research. Partnerships are expected to develop during the different stages of a process, and this creates a modus operandi on a strategic and operational level. What were the long-term results of the collaboration and the boundary spanning within the water board? It would be interesting to explore how cooperation among partners can be stimulated – on in which agendas would be aligned and spatial tasks could be jointly executed. Nevertheless, there is a limit to the possibilities, as not all boundaries will always be opened up. Additionally, actors might enforce boundaries in order to safeguard their budgets or plans.

Another interesting topic for further investigation would be how the water board is adapting its perspective within water management, due to the lessons learned within projects such as the Kristalbad project. Contextual Water Management already was a vision on how the water board should relate to its partners and surroundings. What could be considered the next development? For this question, considering the genesis of Contextual Water Management would be relevant, as the cognitions of the water board are affected by its context, but by the actors with whom the water board interferes, as well.

Several of the involved public organisations acknowledged that although this project was unique in its way of combining different objectives, sectors and resources, there has been no time to reflect on what had been done. This entailed that the possibility to distillate learned lessons from this case was missing. As a question regarding learned lessons from the Kristalbad project was not directly relevant for this research question, but a valuable source for the water board, a session was organised with project leaders from the water board Vechtstromen. This session was organised in collaboration

with the project leaders of the Kristalbad to reflect on the project. This more practical report, written to be of value to the water board, is added as an annex to this thesis for the interested reader.

Reference list

Books and articles

Argyris, C. and Schön, D.A. (1996). Organizational learning II: Theory, method and practice Reading, MA: Addison-Wesley.

Bleumink (2013). 'Waterschap Regge en Dinkel (WRD) Nature pilot with research and development projects of Water Collective Twente' In: *DROP project partners, Overview of European drought adaptation pilot projects in the DROP project.*

Boer, C., de, Bressers, H. (2011). *Complex and Dynamic Implementation Processes. The renaturalization of the Dutch Regge River.* CSTM – Institute for Innovation and Governance Studies University of Twente: Enschede.

Bressers, J.T.A. (2004). Chapter 10 of: *Governance for Sustainable Development: The Challenge of Adapting Form to Function*, William M. Lafferty (Editor), Edward Elgar publishing: Cheltenham, pp. 284-318.

Bressers, J.T.A. (2009). 'From public administration to policy networks: Contextual interaction analysis'. In Stéphane Nahrath and Frédéric Varone (eds). *Rediscovering Public Law and Public Administration in Comparative Policy Analysis: A Tribute to Peter Knoepfel* (pp. 123–142), Presses polytechniques, Lausanne.

Bressers, N.E.W. (2011, October 14). Co-Creating Innovation: A Systemic Learning Evaluation of Knowledge and Innovation Programmes. Erasmus University Rotterdam. Retrieved from http://hdl.handle.net/1765/26729

Bressers, Hanegraaf, Lulolfs (2008). Workshop complexe waterprocessen: Externe en Interne dilemma's. University of Twente.

Bressers, J. and Kuks, S.M. (2004). Integrated governance and water basin management: Conditions for regime change towards sustainability. Dordrecht-Boston-London: Kluwer.

Bressers, J.T.A. and de Boer, C. (2013). Contextual Interaction Theory for Assessing Water Governance, Policy and Knowledge Transfer. In: C. De Boer, J. Vinke-de Kruijf, G. Ozerol, J.T.A. Bressers (eds). Water Governance, Policy and Knowledge Transfer International Studies on Contextual Water Management (36-54). Routledge, UK.

Bressers, J.T.A. and Lulofs, K.R.D. (2010). *Governance and complexity in water management. Creating cooperation through boundary spanning.* Cheltenham: Edward Elgar.

Bressers, H., Lulofs, K., Warner, J., Huitema, D., Brouwer, S., (2009). *Bestuurlijk schakelen.* Handreiking, december 2009. In collaboration with: Universiteit Twente, Vrije Universiteit Amsterdam, Waterschap Regge en Dinkel & Newater.

Broekhoven, van, Boons, Buuren, van, Teisman (2014). Boundaries in action: a framework to analyse boundary actions in multifunctional land-use developments. Environment and Planning C: Government and Policy 2015, volume 33, pages 1005 – 1023.

Coenen, H.J.M. and Bressers, J.T.A. (2012). Trends, Drivers and Dilemmas in the Transition Towards Sustainable Water Management. In J. Meadowcroft, O. Langhelle, and A. Rudd (eds) *Governance, Democracy and Sustainable Development: Moving Beyond the Impasse* (34-55). Cheltenham, UK: Edward Elgar.

Huitema, D., W. Egas, S. Hanegraaff, S. Kuks, and K. Lulofs. (2006). Coupling strategies in water management. An exploration on the basis of literature from the policy sciences and related fields. Report of the NeWater project - New Approaches to Adaptive Water Management under Uncertainty. Prepared under contract from the European Commission. Deliverable no.: D1.2.5.

Jeffrey, P. & R.A.F. Seaton (2004). 'A Conceptual Model of 'Receptivity' Applied to the Design and Deployment of Water Policy Mechanisms', *Journal of Integrative Environmental Sciences*, 1(3), pp. 277-300.

Mostert, E. (2006). *Integrated Water Resources Management in The Netherlands: How Concepts Function.* Journal of Contemporary Water Research & Education. Issue 135, pp. 19-27.

Pahl-Wostl, C., Downing, T., Kabat, P., Magnuszewski, P., Meigh, J., Schlueter, M., Sendzimir, J. and S. Werners (2005): *Transition to Adaptive Water Management; The NeWater project.* NeWater Working Paper 1. [online] URL:http://www.newater.uos.de/intern/sendfile.php?id=48

Pahl-Wostl, C., J. Sendzimir, P. Jeffrey, J. Aerts, G. Berkamp, and K. Cross (2007). *Managing change toward adaptive water management through social learning.* Ecology and Society 12(2): 30.

Ulrich, W. (1983). Critical Heuristics of Social Planning: A New Approach to Practical Philosophy. Bern, Switzerland, and Stuttgart, Germany: Haupt. Paperback reprint version, Chichester, UK: Wiley, 1994.

Warner, J.F. Lulofs, K. ; Bressers, H. (2010). 'The fine art of boundary spanning: making space for water in the east Netherlands' in: *Water Alternatives*, Year: 2010 vol:3 iss:1, pp. 137 -0175

Warner, J, (2016). "Framing and linking Space for the Grensmaas: Opportunities and Limitations to Boundary Spanning in Dutch River Management" in: Edelenbos, J, Bressers, N, Scholten, P., (2016). Water Governance as Connective Capacity. Routledge.

Williams, P. (2002). The competent boundary spanner. *Public administration 80*(1), 103-124.

Internal record and documents

Actieplan Duurzaamheid Gemeente Enschede (2015).

Retrieved from: https://www.enschede.nl/sites/default/files/actieplan-duurzaamheid.pdf

Bosch Slabbers & Arcadis (2006). Kristalbad; waterberging en ecologische verbindingszone. Arnhem / Apeldoorn, 9 november 2006.

Gemeente Enschede (2006). *Kleur bekennen in Enschede-West*: 'Enschede-West: ruimte voor economie, ecologie, water en mobiliteit'. Folder published by municpality.
Retrieved from: http://www.twekkelo.nl/documenten/doc_view/95-folder-kleur-bekennen-in-enschede-west.html

Grontmij (2004). Ecologische verbindingszone Enschede-Hengelo, 24 september 2004.

Koers Middengebied Enschede-Hengelo (2002). the Municipalities of Enschede and Hengelo.
Internal document of the water board: available on request.

Kristalbad projectplan (2010). Waterschap Regge en Dinkel. Date: February 24, 2010.
Internal document of the water board: available on request.

Kristalbad 'Schakel tussen land en stad, droog en nat' (2011). Waterschap Regge en Dinkel.

Retrieved from: http://www.vechtstromen.nl/projecten/projecten/kristalbad/

Memo middengebied (2002). Voorstel Dagelijks Bestuur, Waterschap Regge & Dinkel.
Internal document of the water board: available on request.

Natte Structuurschets "Hengelo-Enschede" (1992). Heidemij Advies report, by Water Board Regge & Dinkel. *Internal document of the water board: available on request.*

Raadsvergadering Hengelo (2006). *Onderwerp: Ecozone Middengebied Enschede-Hengelo*. Dienst / Sector: SBO/RO. Registratienummer: 108776. Raadsvergadering d.d. 20 juni 2006.

Startnotitie bestuurlijk overleg (1997). Waterschap Regge & Dinkel Voorgeschiedenis Kristalbad.
Internal document of the water board: available on request.

Streekplan Overijssel 2000+ (2008). Plannen voor Ruimte, Water en Milieu. RWB. Streekplan met wijzigingen tot mei 2008. Vastgesteld bij besluit van Provinciale Staten van Overijssel van 13 december 2000, nummer 44. Provincie Overijssel.

Toelichting Bestemmingsplan Drienerbraken - Kristalbad (2013).
Gemeente Enschede. Versie 23: 1-10-2013.

Retrieved from: http://www.raad053.nl/stukken/466/23/

Uitvoeringcommissie Enschede-Noord & Waterschap Regge en Dinkel (2009). “Projectplan Kristalbad. Onderdeel van het inrichtingsplan als bedoeld in art. 17 wet Inrichting Landelijk Gebied”. 18 december 2009.
Internal document of the water board: available on request.

Voorbereidingscommissie Enschede-Noord (2008)."Ontwerp Inrichtingsplan Enschede-Noord" Versie: 18 juli 2007. Ontwerp Inrichtingsplan Enschede-Noord Planuitwerking van het Reconstructieplan Salland Twente voor het deelgebied Enschede-Noord volgens artikel 18 lid 1 van de Reconstructiewet, welke op grond van art. 48 Reconstructiewet is aan te duiden als een inrichtingsplan, als bedoeld in art. 17 van de Wet Inrichting Landelijk Gebied.
Weblink: http://api.commissiemer.nl/docs/mer/p19/p1967/1967-03inrichtingsplan_ontwerp.pdf

Voorstel Gemeenteraad Enschede (Vergadering 9 september, 2002). Onderwerp: *Integrale MER/VER Kanaalzone.* Dienst Stedelijke Ontwikkeling en Beheer. Stuknummer 10872.

Voorstel Gemeenteraad Enschede (Vergadering 03 december, 2007). Onderwerp: *Ontwerp Inrichtingsplan Enschede Noord*. Dienst: Dienst Stedelijke Ontwikkeling en Beheer, Programma: Ruimtelijke ontwikkeling. Stuknummer: 12917.

Waterbeheerplan Waterschap Regge en Dinkel 2010 > 2015. Waterschap Regge en Dinkel.

Internal document of the water board: available on request.

List of interviewees

Water board Vechtstromen:

Personal communication Frits Huttenhuis, 10-05-2016
Personal communication Stef Fortkamp, 17-05-2016
Personal communication Rolf te Velde, 24-05-2016
Personal communication Jan-Rikus van Limbeek, 24-05-2016
Personal communication Ben van Veenen, 27-06-2016
Personal communication Stefan Kuks, 15-07-2016 & 30-08-2016
Personal communication Piet van der Erp, 28-07-2016

Municipality of Enschede:

Personal communication Hans Koier, 05-07-2016
Personal communication Henk Visscher, 05-07-2016

Municipality of Hengelo:

Personal communication Leonie de Vries, 03-08-2016

Province of Overijssel:

Personal communication, Willem Maalderink, 08-07-2016

Personal communication Herman Arentsen, 08-07-2016

Environmental Organisation Overijssel:

Personal communication Martien Knigge 12-07-2016

Personal communication Harry Koster, 18-07-2016

Government Service for Land and Water Management:

Personal communication Sander Uiterwijk, 18-07-2016

Appendices I. Projectleiderssessie Waterschap Vechtstromen

In deze bijlage wordt de projectleiderssessie beschreven die was georganiseerd om de studie naar het proces van het Kristalbad project intern binnen Waterschap Vechstromen te bespreken. Allereerst wordt de opzet van de sessie besproken, waarna de opbouw uitgelegd wordt en uiteindelijk een nabespreking wordt gegeven waarin het boek 'Gedeeld Eigenaarschap' wordt gebruikt om een praktische insteek te geven.

Opzet projectleiderssessie 10-1-2016

Aanleiding

Waterschap Vechtstromen heeft in 2016 verschillende studenten aangetrokken om reeds afgeronde projecten in de kaart te brengen. Een van die projecten was het Kristalbad, waarbij ditmaal niet op de inhoud van het project maar juist op het proces gefocust werd. Door middel van een reconstructie wordt er teruggeblikt op het project. Hoe kreeg het project vorm, wat waren hierbij de drijvende factoren, wat waren de knelpunten en wat kan het waterschap van dit proces leren? Dit met de intentie om te kijken hoe het waterschap zich ten opzichte van de andere actoren verhoudt en vraagstukken voor toekomstige uitdagingen bloot te leggen. Duidelijk wordt uit de reconstructie dat de context en de timing heel belangrijk waren voor de voortgang en het succes van het project. Door het gereconstrueerde project nogmaals door te nemen binnen WVS werden de cruciale momenten/factoren besproken. Daarnaast bood het een uitgelezen kans om te kijken naar het proces en project management van het waterschap en aan de projectleiders te vragen waar zij in hun dagelijks werk op stuitten.

Doel

Door middel van interviews met de betrokken partijen/personen is er tijdens de dataverzameling voor de studie informatie ingewonnen over het Kristalbad. Het doel van de projectleiderssessie was om deze informatie te delen en de meningen van de partnerorganisaties 'naar binnen te brengen'. Hoe beleefden de andere partijen de samenwerking? Tijdens de sessie werd gekeken hoe het waterschap de rol van trekker op zich heeft genomen gedurende het project en hoe de samenwerking verliep. De besproken punten werden gekoppeld aan de betekenis van project- en of proces management.

De volgende vragen komen aan bod:
- *Terugblikkend naar het Kristalbad project, wat is van belang voor succesvol project management?*
- *Wat vraagt dat van onze mensen en organisatie?*
- *Wat zijn de essentiële tools voor een project leider in multi-actor samenwerkingsprojecten?*
- *Zijn er reeds (on)bewuste lessen binnen het waterschap in project management en hoe worden die geleerd?*

Wijze

Door middel van een informele sessie werden de verschillende projectleiders meegenomen in 'het

verhaal' van het Kristalbad. Waar werden de stappen gezet en hoe werd er omgesprongen met risico's? Tegelijkertijd werd er ook kritisch gereflecteerd op het proces van het project. Wat is er nodig - en wat moet er juist worden gelaten - om anno 2016 als waterschap een project aan te sturen? Hierin werd het Kristalbad als voorbeeld genomen, maar niet als 'voorbeeldige' casus beschouwd; externe factoren en de invloed van de context werden ook meegewogen. Daarnaast is het Kristalbad, in vergelijking met andere projecten van het waterschap, een relatief groot project met veel stakeholders dat niet alle projecten binnen het waterschap representeert.

Voor wie

De belangrijkste doelgroep van deze sessie waren de huidige projectleiders van het waterschap Vechtstromen. Zij kunnen eigen ervaringen spiegelen aan cruciale aspecten binnen het Kristalbad en op die manier reflecteren op de casus. Verder is het stilstaan bij deze ervaringen relevant voor verdere organisatieontwikkeling. Wat is er nodig om de projectleiders zo goed mogelijk te ondersteunen en elk project in goede banen te leiden?

Stef Fortkamp en Piet van Erp spelen als direct betrokkenen een belangrijke rol in de sessie. Dieneke Mooiman vertelt over haar studie en Stefan Nijwening faciliteert de sessie.

Inhoud:

- Drie kwartier interactieve discussie met de projectleiders.
- Enerzijds bevindingen van Kristalbad studie, maar daarnaast ook terugkoppelen van meningen van partners over de samenwerking.
- Naar het proces kijken: eventueel bredere lessen uit het voorbeeld destilleren. Kristalbad niet als blauwdruk; dus niet gaan zenden, maar gebruiken als casus.

Opbouw

1. Introductie/algemeen woord door Stef (max 3 min)

2. Woord over afstudeeronderwerpen binnen WVS door Stefan & introductie Dieneke (max 3 min)

3. Presentatie Dieneke over bevindingen onderzoek Kristalbad (max 10 min)
→ Overzicht van de betrokken partijen en hun rollen: introductie tot onderzoek
- Beelden gebruiken om te triggeren; inzoomen op het proces van buitenaf
→ Eerste slide: eentje met 10 bevindingen binnen het project
- Bijzonderheden, cruciale aspecten van het Kristalbad project?
→ Tweede slide: 10 quotes van externe partijen over het Kristalbad
Wat zeggen de andere betrokken partners (qua beeldvorming) over het (proces van) Kristalbad?

4. Q&A met Piet en Stef als betrokken personen binnen het project en Dieneke als 'externe onafhankelijke' die het project in de kaart heeft gebracht: (max 20 min)
→ Gefaciliteerd door Stefan (die hierin het gesprek sturing geeft)
Bijvoorbeeld aan de hand van de volgende vragen:
- 5 cruciale aspecten/wijze lessen binnen het project (succesfactoren of meevallers)?
- Hoe worden 'lessen' in projectmanagement van WVS geleerd?
- Wat vraagt dat van onze mensen en organisatie in soortgelijke samenwerkingsprojecten?
- Kunnen we in de toekomst soortgelijke projecten draaien?

5. Afrondend: waarom interessant om terug te blikken op Kristalbad? (5-10 min)
- Niet per se vervolgstappen a.d.h.v. de projectleiderssessie, maar vooral in gesprek blijven.
- Het delen van het moment van reflectie en aan de hand van de bespreking van het Kristalbad terugblikken op eerdere gerealiseerde opgaves en projecten.
- Eventueel generaliserende lessen trekken vanuit het Kristalbad, met daarbij invloed van externe partners waarbij kritische geluiden niet vermeden worden.

Nabespreking

Belangrijke ter tafel gekomen zaken
- Hoe wordt het duidelijk wie de 'kartrekker' is van het project? Wat is de rol van de verschillende partijen; meelopers/trekkers etc.?

- Project was breed: er is aan de voorkant veel gedaan; niet meer een proces? Was het een proces of een project? Wat was het mandaat van de projectleider? Ging hij te werk als een proces- of als een projectleider?

- Onder de projectleiders is er onduidelijkheid over wat een project is wat een proces is. Kloppen de tools van de projectleider nog met de taak die ze hebben? Wanneer is project een proces? Wat voor mandaat krijgen projectleiders om een project te starten? Wanneer wordt er gesproken van een proces (aan de voorkant) en wanneer gaat dit over in een project?
→ Vraag vanuit de projectleiders voor een 'update' van capaciteiten: de tools die de projectleiders hebben (of krijgen aangereikt) komen niet overeen met de technieken die ze nodig hebben.

Gedeeld eigenaarschap[32]

In het boek 'Gedeeld Eigenaarschap' worden concrete handvatten voor de inrichting en begeleiding van samenwerkingsprocessen voor maatschappelijke veranderopgaven gegeven. Gedeeld eigenaarschap benadert de maatschappelijke veranderopgaven niet langer vanuit het perspectief van individuele organisaties, maar stelt het gezamenlijke samenwerkingsproces centraal. Aangezien de samenwerking een cruciaal element was bij het Kristalbad project worden principes uit dit boek gebruikt om een praktische link te maken. De kerngedachte van 'Gedeeld Eigenaarschap' is dat als deze actoren elkaar proactief, vroegtijdig en in gelijkwaardige verhoudingen beïnvloeden bij hun strategische keuzes, er een veel effectievere en duurzame samenwerking ontstaat.

Twee sturingsmodellen met sturingsprincipes

1) Sturen op resultaat, verbinding en vernieuwing

I. Resultaat (inhoud van het proces) → Sturen met: geld, organisatie, informatie en tijd

VB)
- Bestuurlijk belang moet er zijn (bij de verschillende partijen) en kenbaar gemaakt worden
- Helder uiteenzetten van de verschillende belangen, motivaties en middelen voor de partijen
- De wet van de vereiste variatie geldt bij het Kristalbad: integraal denken en koppelen van kansen (er moeten minstens zoveel verschillende stuurmaatregelen mogelijk zijn als het aantal verstoringen: complexiteit met complexiteit aangaan)

[32] Schipper, L. en Lamberigts, P. (eds,) (2015). *Gedeeld Eigenaarschap. Nieuw perspectief op samen werken aan maatschappelijke veranderopgaven*. Vakmedianet Management B.V.

II. Verbinding (wijze van samenwerking tussen actoren) → Sturen met: timing, communicatie, rollen, belangen en invloed

VB)
- Aanjager is nodig: er moet duidelijk gemaakt worden voor de anderen wat er te halen valt.
- Persoonlijk, verbindend leiderschap moet getoond worden waar men zich achter wil scharen en dat vertrouwen inboezemt voor het project
- Succes van een project wordt bepaald aan de voorkant: door inventief/anticiperend en met een adaptieve houding op de situatie in te spelen.
- Lef tonen: gecalculeerd risico nemen i.c.m. bestuurlijke 'rugdekking'

III. Vernieuwing (de effecten in de brede context van het proces) → Sturen met: inspiratie, kennis, creativiteit, energie, diversiteit

VB)
- Zoeken naar de grenzen van de ambtenarij: zoeken naar ruimte om elkaar tegemoet te komen.
- Succes is mensenwerk; gaat om vindingrijkheid, attitude, karaktereigenschappen van de betrokkenen die de ruimte moeten krijgen (en steun!) om dit te ontwikkelen
- Dynamiek tussen eenvoud en complexiteit vinden: 'garbage can model'; oplossingen, problemen en middelen kunnen aan elkaar gekoppeld worden.

2) Balanceren tussen eenvoud en complexiteit

Vereenvoudigen: behoefte aan structuur of ordening in een samenwerkingsproces.

→ Soms vragen processen om meer eenvoud, soms om het vergroten van de complexiteit.
VB) Dat WRD als trekker het project 'op zich nam' zorgde voor een vereenvoudiging in de samenwerking (meer duidelijkheid van rollen en fasering van het project etc.)

Compliceren: wanneer resultaten (inhoud) niet wordt behaald, parallelle processen aansluiten.

→ Een samenwerkingsproces kan 'levend' gehouden worden door afwisseling in eenvoud en complexiteit; actoren kunnen effectief zijn.
VB) Doordat er bepaalde gelden nodig waren en 'men er niet uitkwam' werd het project 'gecompliceerd' door er een waterkwaliteitsopgave aan te koppelen (i.v.m/ subsidies verbreden van de inhoudelijk agenda).

Bij het Kristalbad zijn beide sturingsprincipes (Sturen op resultaat, verbinding en vernieuwing & balanceren tussen eenvoud en complexiteit) waar te nemen. Elementen van hiërarchie en netwerk: combinaties van beide systemen. Eigenaarschap van actoren is groter binnen een proces wanneer de verschillende pijlers van elkaar worden onderscheden en sturing plaatsvindt op allerdrie de pijlers. Doordat er binnen het project gefocust wordt op resultaat, verbinding en vernieuwing wordt er door de betrokken partijen verantwoordelijkheid genomen. Vertrouwen in het proces en vertrouwen tussen afzonderlijke organisaties – en personen - is belangrijk voor het slagen van een samenwerkingsverband. Door mee te bewegen met kansen wordt adaptief vermogen gestimuleerd dat zorgt voor flexibiliteit in de samenwerking.

In procesmanagement kan het positief werken door te schakelen tussen sectoren, schalen en tijd. Hierbij is het soms de kunst om het project in de breedte aan te pakken door de sectorale visies van partijen te verruimen, het project naar een hoger niveau te tillen - bestuurlijk gezien en qua regionaal, nationaal of Europees beleid, of door bijvoorbeeld een beslissing uit te stellen en zo ruimte te houden voor creativiteit, voor het voor het vergroten van de set mogelijke oplossingen en het bereiken van een optimaal resultaat. Hierin kan het te snel inkaderen om een project vast te leggen uiteindelijk obstructief en tegenovergesteld werken leidt vaak alleen maar tot meer chaos. Zo kon bijvoorbeeld bij het Kristalbad na de vaststelling van het landinrichtingsplan via de ‘landinrichtingsmodule’ een innovatieve aanpak worden gerealiseerd.

Bijlage: powerpoint slides presentatie Dieneke

Reconstructie van het proces van het Kristalbad

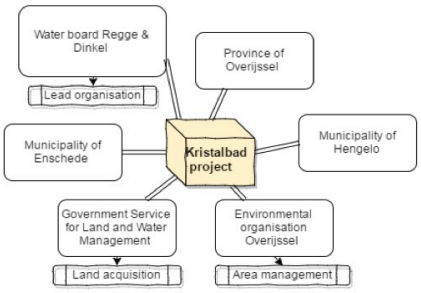
Dieneke Mooiman

Master Public Administration

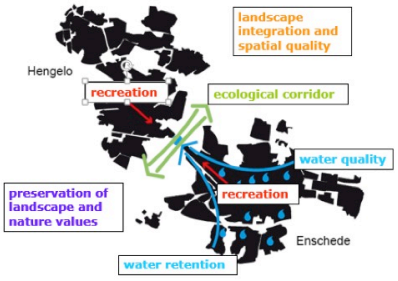
Een welbekend beeld..

Waarom interessant?

De betrokken partijen



De uiteindelijke functies



Reconstructie van het proces

- Beschrijvende achtergrondschets
- Cruciale momenten geanalyseerd:

→ *ingezoomd op de verschillende partijen (en hun positie, motivatie en middelen) en de interactie met de specifieke context*

- Uitgezoomd voor 'bredere lessen' en terugkoppeling

10 bevindingen (1-3)

Inhoud van het proces:

- Bestuurlijk belang moet er zijn (bij de verschillende partijen) en kenbaar gemaakt worden
- Helder uiteenzetten van de verschillende belangen, motivaties en middelen van de partijen zorgt voor draagvlak
- De 'Wet van de vereiste variatie' geldt bij het Kristalbad: (er moeten minstens zoveel verschillende stuurmaatregelen mogelijk zijn als het aantal verstoringen)
  → integraal denken en koppelen van kansen

10 bevindingen (4-7)

Wijze van samenwerken:

- Aanjagende partij is nodig: er moet duidelijk gemaakt worden voor de anderen wat er te halen valt.
- Persoonlijk, verbindend leiderschap moet getoond worden waar men zich achter wil scharen en dat vertrouwen inboezemt voor de partners en het project.
- Succes van een project wordt bepaald aan de voorkant: door inventief/ anticiperend en met een adaptieve houding op de situatie in te spelen.
- Lef tonen: gecalculeerd risico nemen i.c.m. bestuurlijke 'rugdekking'.

10 bevindingen (8-10)

De context van het proces:

- Zoeken naar de grenzen van de ambtenarij: zoeken naar ruimte om elkaar tegemoet te komen.
- Succes is mensenwerk; gaat om vindingrijkheid, attitude, karaktereigenschappen van de betrokkenen die de ruimte krijgen (en steun!) om dit te ontwikkelen
- Dynamiek tussen eenvoud en complexiteit vinden: oplossingen, problemen en middelen kunnen aan elkaar gekoppeld worden.

10 quotes van externe partijen over het Kristalbad

I. "Wij vonden als Gem. Enschede, dat alle Enschedeërs waterschapsbelasting betalen, maar er eigenlijk nooit wat van terug zien. We vonden toen ook wel dat het waterschap geld uit moest geven voor stedelijk water. Daar zou dit dan ook weer een mooi project voor zijn.." (Gem. Enschede).

II. "De rol van het waterschap was belangrijk, en die van de provincie ook. De rol van de gemeenten was minder prominent: ze hadden ook niet veel financieel bij te dragen. Wie betaalt, bepaalt: dat geldt nog steeds." (Provincie Overijssel)

III. "Het is alleen maar gelukt om daar natuur met waterberging te realiseren, door alle partijen water bij de wijn te laten doen. De partijen waren gemotiveerd omdat ze zagen dat het door moest gaan: dat alle partijen belang hadden. Het gaf een goed gevoel dat het 'bestuurlijke gedoe' en de kluwen van belangen, dat je daar toch met zijn allen uit kunt komen." (Provincie Overijssel)

IV. "Kristalbad - en zo is hoe we het hier (bij Gem. Hengelo) zien - is een zichtbaar iets van de landinrichting. Er gebeurde weinig zichtbaar in het landschap; maar bij het Kristalbad wel. Het werd gezien als een paradepaardje, als echt iets moois dat je voor het gebied doet. En daarom wilden wij als gemeente het recreatieve erin brengen; dat dat dan ook 'beleefbaar' is. (Gemeente Hengelo)

V. "LO en WRD kenden elkaar en wisten hoe ze hun eigen belangen moesten benoemen, zonder ze van een andere partij te ontkennen. LO zat erbij als partij die meestal knikte, af en toe schudde, en ingreep waar nodig. We wisten dat het 'tegensputteren' niet was om het tegensputteren, maar om een beter resultaat te krijgen. Dat is een goede basis voor een constructieve en prettige samenwerking. (Landschap Overijssel)

VI. "Alhoewel de voortgang van het project niet in gevaar was, moesten we voortdurend alert zijn dat alle verschillende elementen bediend werden. In die zin zaten we op het puntje van onze stoel. Dan verdedigden de verschillende partijen hun belangen. "Mooi dat het water doorloopt, maar zo kunnen mijn beesten er niet door". Daar hebben we elkaar over bij de les gehouden, alle partijen onderling. (Landschap Overijssel)

VII. "Volgens mij hebben we een sterkte band met het waterschap. En dat is meer dan met andere waterschappen in de provincie. Maar dat komt niet alleen door dit project, er liggen veel opgaven in Twente die zowel betrekking hebben op water als op natuur, waar op dezelfde hectares meerdere functies worden gerealiseerd om het ruimtebeslag zo beperkt mogelijk te houden." (Provincie Overijssel)

VIII. "Het geloof en vertrouwen in het project werd alleen maar beter gaandeweg; iedereen zag dat het ging werken, dat het mooi werd. Er kwamen andere wensen (toegankelijkheid van het gebied/uitkijktorens etc.), dat zijn plusjes op het ontwerp die het draagvlak en het enthousiasme verder hebben vergroot." (DLG)

IX. "De drie banen die zijn gecreëerd, het is niet duidelijk of die wat doen. Met het ontwerp is geen monitoringsplan opgesteld, waardoor de werking niet wordt gemeten. Hoe schoon is het? Werkt het? Moet hier niet wat over geschreven worden, of je dit vaker moet doen?" (Gem. Enschede)

X. "Ik heb een ding geleerd: als je een groot project wilt doen; stapel een aantal van de dingen op elkaar. Dan is de kans dat je een momentum maakt en dat nog meer mensen mee willen doen groot." (Gem. Enschede)