



Case study dike reinforcement ‘Stadsdijken Zwolle’

Collaboration and integration in dike reinforcement

Thom Bult - S2915170

BSc. Spatial Planning and Design

January 2019

Supervisor: B.J. Kuper



university of
 groningen

faculty of spatial sciences

Colophon

| | |
|-------------------------------|---|
| <i>Title</i> | Case study dike reinforcement 'Stadsdijken Zwolle' |
| <i>Subtitle</i> | Collaboration and integration in dike reinforcement |
| <i>Author</i> | Thom Bult |
| <i>Student number</i> | S2915170 |
| <i>Contact</i> | Gedempte Zuiderdiep 36a 9711 HH Groningen thombult@hotmail.com / t.bult@student.rug.nl |
| <i>Programme</i> | Bachelor Spatial Planning & Design |
| <i>University</i> | University of Groningen Faculty of Spatial Sciences Landleven 1 9747 AD Groningen |
| <i>Supervisor</i> | B.J. Kuper |
| <i>Deadline</i> | 21-01-2019 |
| <i>Version</i> | Final version |
| <i>Illustration frontpage</i> | (H+N+S Landschapsarchitecten, n.d.) |
| <i>Number of pages</i> | 27 (excl. appendices) |
| <i>Word count</i> | 7484 |

Abstract

Climate change and rising sea levels urge countries in deltas like the Netherlands to protect themselves against flooding. In the last decades, integration of spatial planning and water management became an important topic with the implementation of the Dutch Room for the River project. With the programme, next to securing water safety the surrounding spatial quality was also improved. This research aims to explore whether the integration of spatial planning and water management and the integration and collaboration of different actors is taking place in order to positively influence the spatial quality and water safety in the project 'Stadsdijken Zwolle' in the province of Overijssel. In this research the following research question is answered:

"How does collaboration in dike reinforcement contribute to both spatial quality and water safety in the city of Zwolle?"

In order to answer the research question, five semi-structured interviews were held with the main stakeholders. It can be concluded that the most important and dominant actor is the water board with an advisory role for the municipality and the province. The degree of collaboration is high, but the degree of integration is low which is mainly because of the finances of the HWBP. However, there is an incentive among stakeholders to try and improve spatial quality. Even though challenges occurred in the project, stakeholders were positive about further collaboration and integration as the water board is also opening up for the other stakeholders.

By active collaboration, the different actors can still manage to add spatial quality to the area, and by integrating more stakeholders, the collaboration can result in more acceptance for the project. However, the water board should still open up, even more, to make more integration and collaboration possible in future projects. Also, spatial quality should be integrated from the start of the project.

Table of contents

| | |
|---|-----------|
| 1. Introduction..... | 5 |
| 1.1. <i>Background.....</i> | 5 |
| 1.2. <i>Description of the case.....</i> | 6 |
| 1.3. <i>Research problem and research question.....</i> | 8 |
| 1.4. <i>Structure of the thesis.....</i> | 8 |
| 2. Theoretical Framework..... | 9 |
| 2.1. <i>Transition to integrated flood risk management.....</i> | 9 |
| 2.2. <i>Integrated multifunctional approaches.....</i> | 9 |
| 2.3. <i>Multi-level governance.....</i> | 10 |
| 2.4. <i>Degree of collaboration.....</i> | 11 |
| 2.5. <i>Water safety.....</i> | 13 |
| 2.6. <i>Spatial quality.....</i> | 13 |
| 3. Conceptual framework..... | 14 |
| 4. Methodology..... | 15 |
| 4.1. <i>Research method.....</i> | 15 |
| 4.2. <i>Participants.....</i> | 15 |
| 4.3. <i>Ethical considerations.....</i> | 16 |
| 4.4. <i>Data analysis.....</i> | 16 |
| 4.5. <i>Data quality.....</i> | 16 |
| 5. Results..... | 17 |
| 5.1. <i>Importance and roles of stakeholders.....</i> | 17 |
| 5.2. <i>Collaboration and integration.....</i> | 19 |
| 5.3. <i>Challenges and benefits of integration.....</i> | 21 |
| 6. Conclusion..... | 23 |
| 6.1. <i>The influence of collaboration in dike reinforcement.....</i> | 23 |
| 6.2. <i>Future research.....</i> | 24 |
| 6.3. <i>Reflection.....</i> | 24 |
| References..... | 25 |
| Appendix..... | 28 |
| <i>Appendix A: Interview guide.....</i> | 29 |
| <i>Appendix B: Codebook.....</i> | 32 |
| <i>Appendix C: Code tree.....</i> | 33 |
| <i>Appendix D: Informed consent form.....</i> | 34 |
| <i>Appendix E: Interview transcripts.....</i> | 35 |

1. Introduction

In this chapter different elements of the research are discussed. The background is elaborated in paragraph 1.1. The case is described in paragraph 1.2, the research problem in paragraph 1.3 and the structure of the thesis in paragraph 1.4.

1.1. *Background*

For most centuries, water management in the Netherlands was focused on separating land from water with technical solutions (Van Stokkom et al., 2005). However, this technical paradigm was confronted by climate change. It is expected that rivers will have increased peak discharges which can cause flooding in urban areas located in deltas (Runhaar et al., 2012). It was soon discovered, after the old paradigm and its technical solutions (Rijke et al., 2012), that new and planned flood defences have severe impacts on the spatial quality of the surrounding areas (Klijn et al., 2013 in Nillesen & Kok, 2015). Next to this the rivers also nearly flooded in 1993 and 1995 which sparked a transition to a more integral approach of flood risk management (Rijke et al., 2012). The new paradigm made use of integration in which stakeholders in water management and spatial planning are integrated to improve not only water safety but also spatial quality (Rijke et al., 2012). This integration of different policy arrangements and the formation of a more collaborative system of planning (Wiering & Immink, 2006) enable the spatial planners to be involved in an earlier phase instead of a later phase in water management (Nillesen & Kok, 2015). As concerning the relevance of this research, not much research has been done on the integration and collaboration on this scale within the Dutch HWBP projects, which makes it particularly interesting. The question is then if and how the integration and collaboration between various stakeholders happen in projects like 'Stadsdijken Zwolle' in order to positively influence the spatial quality and water safety. Furthermore, it is important to notice whether the stakeholders experience challenges which the stakeholders need to overcome.

1.2. Description of the case

'Stadsdijken Zwolle' is a dike reinforcement project located in the province of Overijssel. The project is located in the delta of the IJssel river within the city of Zwolle. The area will inevitably experience the consequences of climate change (Wdo-delta.nl, n.d.) such as increasing peak discharges of the rivers. In turn, this could increase the chances of flooding in the districts surrounding the project area (see figure 1).

The project itself consists of the Zwolle-IJsselchannel and the Zwarte Water. At the heart of the project lies a total of 9 kilometres of dikes of which 7,5 kilometres need to be reinforced (see figure 1). These reinforcements are enacted under the 'Hoogwaterbeschermingsprogramma' or HWBP, which is part of the Delta Programme (Wdo-delta.nl, n.d.). The reinforcement is to be executed by the water board Drents-Overijsselse Delta (WDO-delta for short) and is expected to finish in 2024. However, the dike reinforcements are not like ordinary reinforcements, but it contains a reinforcement that lies within the city boundaries (see figure 1) and thus can influence the spatial quality of a big part of the city of Zwolle.

The primary goal of the HWBP remains the improvement of water safety, which means that spatial quality is no longer a goal. However, different government entities in the area would want to see the overall spatial quality of the area to be improved, by for example integrating the dike in the area and improving connections with the inner city and the city districts. Even though WDO-delta remains the most important and decisive actor in the project, the water board has to convince the other government entities in order to start the project. This is also the main reason why WDO-Delta is trying to involve the residents, companies and governmental entities to discuss the possibilities of these improvements. However, it is decided that funding for this integration will not be paid by the water board itself (Wdo-delta.nl, n.d.).



Figure 1: Project area 'Stadsdijken Zwolle' (Created with ArcGIS)

1.3. *Research problem and research question*

River Deltas are the most densely populated areas in the world and when considering climate change deltas are at high risks (IPCC, n.d.). One of these big deltas in the world is the Netherlands of which 60% is susceptible to flooding (Van Alphen, 2016) and 29% can be attributed to river flooding (Runhaar et al., 2012). In 2014 it was decided by the national government under the enacted HWBP that some parts of the Netherlands should be better protected (Wdo-delta.nl, n.d.). The new national safety standards meant that some of the dikes around the city of Zwolle need to be strengthened in order to protect Zwolle and its hinterland from flooding (Wdo-delta.nl, n.d.). Within the new Delta Programme, spatial planning and water management are integrated, instead of only focusing on the technical expertise of water managers, resulting in more collaborative planning (Wiering & Immink, 2006). It is the question if and how the project 'Stadsdijken Zwolle' follows this same integration and collaboration of the new paradigm because reinforcement of dikes can be seen as a somewhat technical solution which will have significant impacts on the spatial quality of its surroundings (Klijn et al., 2013 in Nillesen & Kok, 2015).

This research aims to explore to what degree the integration and collaboration between the policy fields spatial planning, water management and the different actors involved take place in the project 'Stadsdijken Zwolle.' Furthermore, it is essential to explore how different actors experience the degree of integration and collaboration. The observed results from this research could be used to further improve the process of integration and collaboration in the future. Therefore, the research question is defined as follows:

How does collaboration in dike reinforcement contribute to both spatial quality and water safety in the city of Zwolle?

In order to answer the research question the following secondary questions will be answered:

- *Who are the most important stakeholders and what are their roles in the project 'Stadsdijken Zwolle'?*
- *To which degree are spatial planning and water management integrated in the project 'Stadsdijken Zwolle'?*
- *What are the challenges and success factors of the integration of spatial planning and water management in the project 'Stadsdijken Zwolle'?*

1.4. *Structure of the thesis*

This thesis consists of 6 different chapters. The chapters are structured in the way that every chapter begins with a small explanation on what will be the structure of that chapter. The following sections and topics are discussed: chapter 2 is about the theoretical framework which gives the relevant variables and topics for this research. In chapter 3 the conceptual framework is presented and explained. In chapter 4 the thesis will continue with the methodology. In chapter 5 the results are presented, these are answers to the secondary questions that have been formulated. In chapter 6 answers to the research question is given and finally, the researcher reflects on the research and gives advice for future research.

2. Theoretical Framework

In this chapter different topics and variables are discussed which are used in the research as a framework.

2.1 Transition to integrated flood risk management

Within flood risk management a vital transition is witnessed from technocratic to integrated flood risk management. It first started with a technocratic approach, this paradigm which was prevailing until the 20th century (Bosch & van der Ham 1998; Van der Ham 1999; Lintsen, 2002 in van der Brugge et al., 2005), focused on the physical aspects and mechanisms of flood risk management (Van der Brugge et al., 2005). The technocratic approach has resulted in a closed system of defence with structural approaches (Van der Brugge et al., 2005). Later it was discovered that the old 'control paradigm' had a serious impact on the spatial quality of its surroundings (Klijn et al., 2013 in Nillesen & Kok, 2015). Furthermore, the rivers nearly flooded in 1993 and 1995 and together it sparked a transition from only building dikes to giving 'space for rivers' (Wiering & Immink, 2006; Rijke et al., 2012). The Dutch then started to "live with water" characterised by soft-engineering, instead of hard engineering (Meijerink & Dicke, 2008). With the Room for the River project, the new paradigm was incorporated, and it can be seen as a transition as spatial quality was integrated as a second objective (Nillesen & Kok, 2015). However, according to van Herk et al. (2015), the new integrated approach had to overcome hurdles and cultural pressure because the politicians and experts were used to the old sectoral and regulatory arrangements. In the new paradigm, different stakeholders participate, and their interests need to be considered, which resulted in a much more long-term approach and more collaboration of these actors in the process (NRLO, 2000 in van der Brugge et al., 2005). However, according to van der Valk (2002), this process can also be complicated, because there is a rising amount of complaints about the treacherous character.

2.2. Integrated multifunctional approaches

A fundamental part of the integrated flood risk management is the integration of water management and spatial planning of which there is a growing admiration (Nillesen & Kok, 2015). Increased acceptance and even cost reductions for flood risk measures are achieved by merging the measures with other objectives, for example, urban planning (see figure 2 & 3) (Van Alphen, 2016). These multifunctional approaches can result in increased benefits for society as the approaches improve both water safety and spatial quality (Van Alphen, 2016).



Figure 2: Room for the Waal: combining a bypass with urban development (Van Alphen, 2016).



Figure 3: Coastal defence reinforcement in Katwijk combined with a parking garage (Van Alphen, 2016)

However, to have success, the different policy fields need to accommodate their investment agendas and trust each other in their engagement (Van Alphen, 2016). However, the two policy fields are traditionally separated in policy making, and

connections are mostly fragile and indirect (Woltjer & Al 2007). One of the significant barriers in the integration according to van der Brugge et al. (2005) is the fact that the water regime is organised in a traditional way and many regard the structure as outdated (van der Brugge et al., 2005). The different stakeholders should join on a personal account to avert the limited, short-term focus (van der Brugge et al., 2005). Instead, the stakeholders should focus on formulating a common problem (van der Brugge et al., 2005).

2.3 Multi-level governance

Governance can be seen as the result of cooperation between different actors across various levels and policy fields (Agrawal, 2003 in Rijke et al., 2012) and the multi-level governance approach is needed to overcome challenges between the various stakeholders (Warner et al., 2013 in Rijke et al., 2012). This is also elaborated by Meijerink & Dicke (2008) who discuss that there is doubt whether state entities, market or even society can tackle the challenges of climate change and flooding on their own, this is also why more collaboration is needed. Furthermore, according to van der Brugge et al. (2005), a transition to more integrated flood risk management can only take place when all levels of governance are aligned, and thus that collaboration at different levels is intensified. It is stated by van der Valk (2002) however that too much collaboration in the process can have its disadvantages, namely delayed and complicated procedures. Moreover, in the collaboration, the different stakeholders should expect resistance (Woltjer & Al, 2007) as water managers and spatial planners come from different backgrounds (Ritzema & van Loon-Steensma, 2018; Woltjer & Al, 2007). Heuvelhof et al. (2007 in Rijke et al., 2012) also discuss that a merger of decentralised and centralised management is needed in the decision-making process. In turn, the collaboration, according to Rijke et al. (2012), can result in local governments linking local challenges to the water safety programme. This can result in the engagement of other stakeholders and ultimately more support for the proposed plans (Arvai, 2003 in Baan & Klijn, 2004). Another challenge is noted by Woltjer & Al (2007) namely that water boards tend to find the new ideas and agenda complicated because it demands them to more proactive and strategic to which they are not used. However, according to Arts (2006, in Rijke et al., 2012), water boards are opening up for the other stakeholders and policy fields, but it was emphasised that the water boards still were maintaining their dominant positions.

2.4 Degree of collaboration

Involvement of different stakeholders in planning processes is not simple (Basco-Carrera et al., 2017). It is a complex and interactive procedure (Basco-Carrera et al., 2017). Stakeholder participation can ultimately lead to a clearer and more democratic way of decision-making (Hare et al., 2003 in Basco-Carrera et al., 2017). However, with collaboration in projects, it is essential to analyse the eagerness of different stakeholders to participate and whether the more dominant stakeholders grant, promote or even encourage other stakeholders to be involved (Voinov et al., 2016 in Basco-Carrera et al., 2017). The ladder below is constructed on the basis of Arnstein's ladder of participation. It includes non-participation, low participation and high participation of stakeholders divided into several layers (see figure 4).

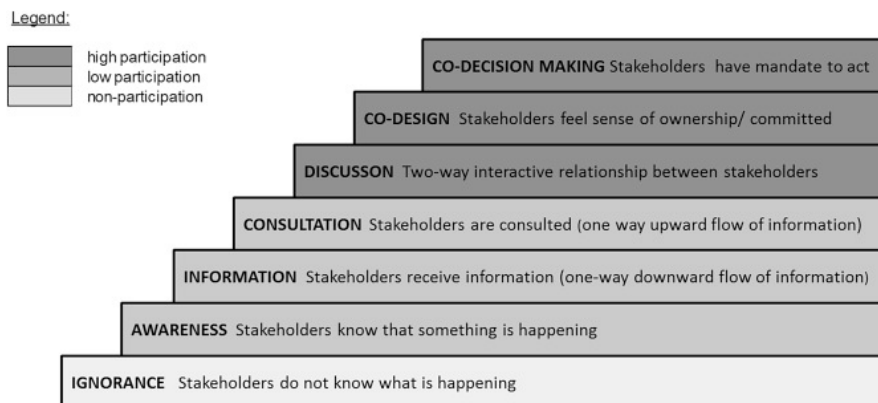


Figure 4: Ladder of participation (Arnstein, 1969; Bruns, 2003; Mostert, 2003 in Basco-Carrera et al., 2017)

Next to the ladder of participation the *Cooperation Continuum* (see figure 5) by Sadoff & Grey (2005, in Basco-Carrera et al., 2017) is also discussed. The model distinguishes different types of collaboration in the process of going from dispute to integration (Sadoff & Grey, 2005 in Basco-Carrera et al., 2017). Four types of collaboration are distinguished:

1. Unilateral action – Stakeholders tend to work in the non-transparent and somewhat autonomous matter. In the process there is a lack of communication or distribution of information, resulting in a level of non-collaboration.
2. Coordination – A real coordination between the different the different governance levels is helping to solve clashing ideas, but there's also regular communication between the stakeholders.
3. Collaboration – It consists of shared learning and adaptation of ideas to achieve collective benefits for the stakeholders involved.
4. Joint-action – It consists of joint assessment, ownership and even investments. The different stakeholders in the process the different stakeholders see each other as partners in the process.

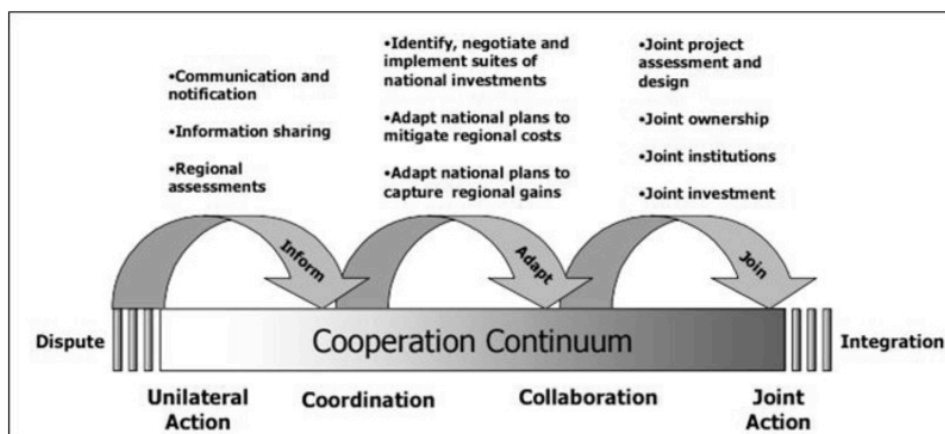


Figure 5: Types of cooperation - The cooperative Continuum (Sadoff & Grey, 2005 in Basco-Carrera et al., 2017)

Basco-Carrera et al., (2017) later combine the “Cooperative Continuum” with the “ladder of participation”. In this model (see figure 6) it is then possible to categorise the stakeholders on the following: not involved, disinterested, interested or key stakeholders (Basco-Carrera et al., 2017).

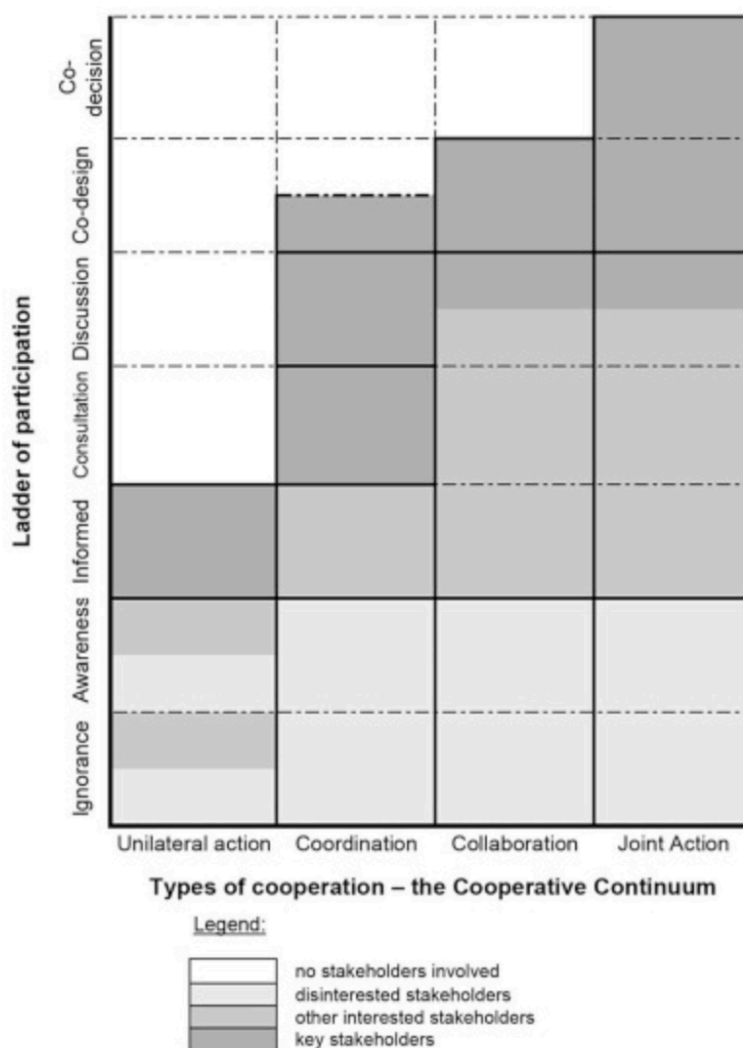


Figure 6: Categorization of stakeholder involvement. (Basco-Carrera et al., 2017)

2.5. Water safety

As climate change is becoming an increasing problem, the Netherlands needs to prepare for the consequences that come with rising sea level and subsidence (Jorissen et al., 2016). The flood management policies in the Netherlands initially were mainly focused on reducing probabilities by the construction of dikes to protect the hinterland (Neuvel & van den Brink, 2009). However, strengthening the dikes results in a more enhanced feeling of safety and ultimately leads to more intensive land-use. Thus, more investments would be at risk when the dikes breach (Vis et al., 2003). Hence the reinforcement creates a false sense of security and has its limitations (Vis et al., 2003; Ritzema & van Loon-Steensma, 2018). This behaviour is envisioned by the 'control paradox' (see figure 7) (Remmelzwaal & Vroon, 2000 in Wiering & Immink, 2006) with a vicious circle of constant dike reinforcement. Rather than only focusing on prevention, new standards should also focus on potential impacts and risks of flooding to put an end to the vicious cycle (Ritzema & van Loon-Steensma, 2018).

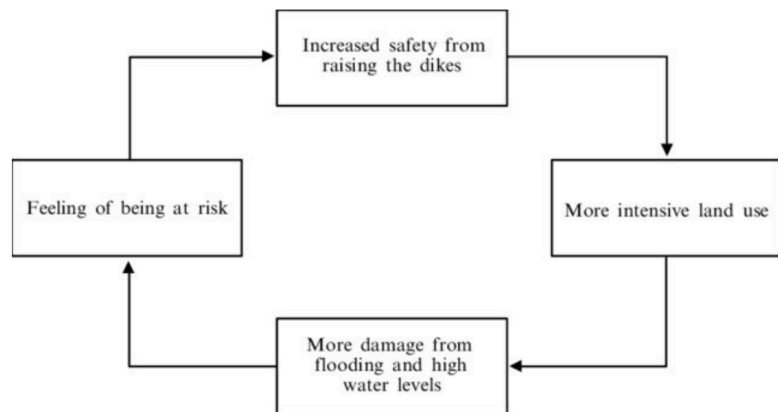


Figure 7: Control paradox (Remmelzwaal and Vroon, 2000 in Wiering & Immink, 2006)

2.6 Spatial quality

As said before, the spatial quality of a surrounding area is significantly influenced by 'technical' projects such as dike reinforcements (Klijn et al., 2013 in Nillesen & Kok, 2015). Spatial quality can be seen as subjective, and it implies aspects that are dependent on its location, making it difficult to measure the differences in qualities between areas according to Swart et al. (2013). As space and spatial quality cannot be understood in quantitative matters, spatial planners are looking for collaborative processes in which various actors address topics and by collaborating new multifunctional relations can be found by linking water and other spatial functions (Wiering & Immink, 2006). Measures of climate adaptation often boost the quality of an area by bringing in new elements (Swart et al., 2013). Van Alpen (2014) also agrees that when adding spatial quality, a new multifunctional approach will result in added benefits for society.

Furthermore, a robust multifunctional dike in comparison to traditional dikes appears to be more efficient in spatial use (Van Loon-Steensma & Vellinga, 2014 in Ritzema & van Loon-Steensma, 2018). By combining different functions, the dike will be safer, but it will ultimately lead to a more long-term focus (Van Loon-Steensma and Vellinga, 2014 in Ritzema & van Loon-Steensma, 2018). However, according to Ritzema & van Loon-Steensma (2018), it is essential to acknowledge that spatial measures alone can never replace the preventive measures, which will remain the most effective strategies.

3. Conceptual framework

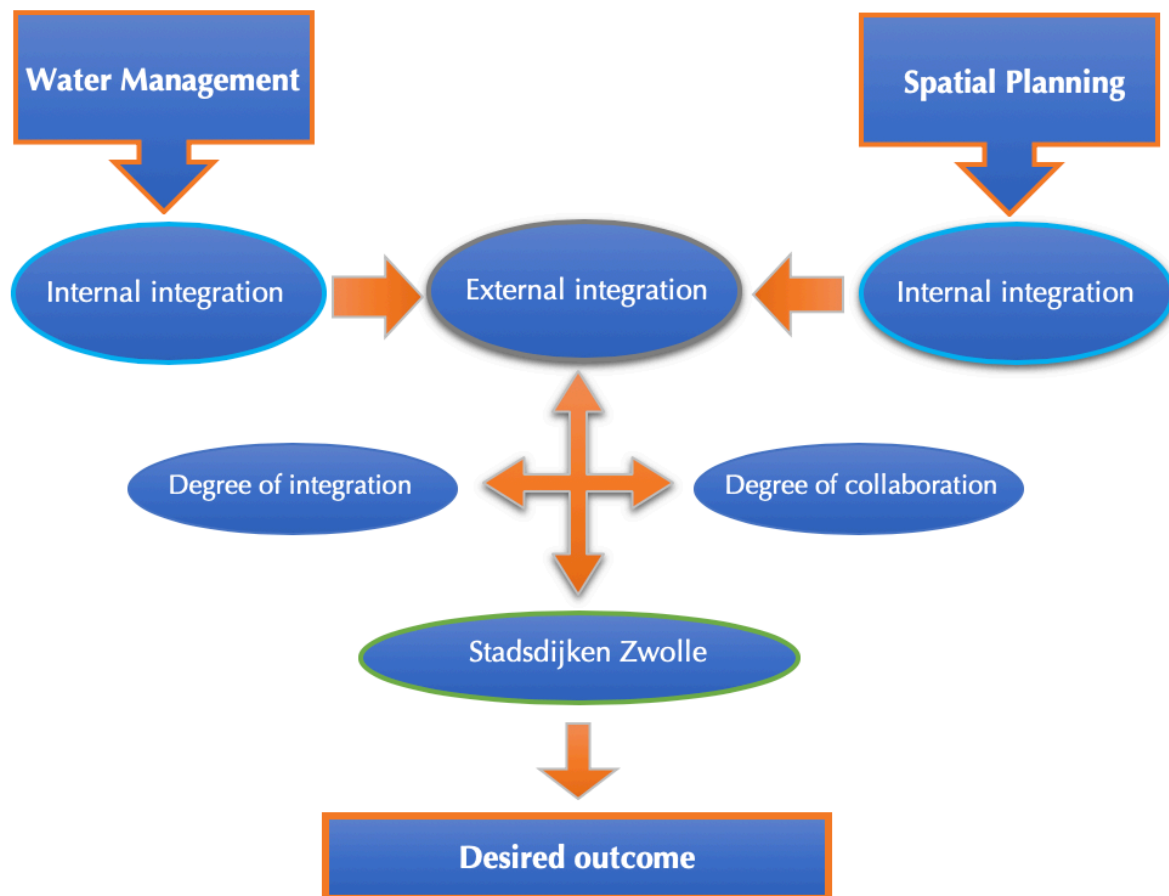


Figure 8: Conceptual model (own work)

Explanation

The theoretical framework can be considered as a basis for the conceptual framework (see figure 8). First, an integration within spatial planning and water management itself takes place (internal integration) which is later followed by an external integration of both of the policy fields to achieve both water safety and spatial quality. The research focuses on the integration and collaboration by exploring to what degree it occurs at the project 'Stadsdijken Zwolle' to positively influence the spatial quality and water safety. The desired outcome of the project depends on the degree of collaboration and integration that occurs.

4. Methodology

In this chapter different considerations about the data collection process are discussed. The research method is discussed in 4.1, ethical considerations in 4.2, participants in 4.3, data-analysis in 4.4 and data quality in 4.5.

4.1 Research method

Because the research is all about personal motives, opinions, and experiences about collaboration and integration qualitative methods were chosen. Qualitative methods make it possible to see differences between the different stakeholders which are involved in the project. But it also enables the possibility to research the ideas behind this behaviour or decisions which is not possible with quantitative methods (Longhurst, 2010).

To gather the primary data, five semi-structured interviews were conducted with the initiator (WDO-Delta) and the other relevant actors. Semi-structured interviews are chosen because it has a predetermined order but also ensures flexibility (Clifford et al., 2010). This flexibility is essential as this makes a more informal style of interviewing possible, as some topics might be more important for the interviewer or interviewee (Longhurst, 2010). In this way, more information can be deducted from the interview as some topics could be more important for the participant than expected. To avoid problems during the interviews, two recording devices were set up to improve the reliability of the data collection process. After the interview took place, the recordings were immediately stored on a computer for back-up.

4.2 Participants

For the data collection, different actors in the project 'Stadsdijken Zwolle' were interviewed. The stakeholders were all contacted via e-mail or telephone. The interviews took place at the offices of the stakeholders in November 2018. It has explicitly been decided that the interviews will be done with administrators, but also with civil servants to prevent being biased by the views of the administrators because the different stakeholders might have different opinions on the degree of collaboration or integration. However, it also gives the possibility to look at the differences in views between the administrators and civil servants.

Furthermore, in this way, the most important and relevant stakeholders in the project were interviewed. The interview guide was used to get the structure in the interview (see Appendix A). All of the stakeholders permitted to record the interviews and the possibilities to use their names for quotes. See table 1 for an overview.

| Name | Function | Organization |
|------------------------|----------------------|---|
| <i>Hans de Jong</i> | Ad interim dike-ward | Water board (Drents-Overijsselse Delta) |
| <i>Bert Boerman</i> | Deputy | Province of Overijssel |
| <i>Ed Anker</i> | Alderman | Municipality of Zwolle |
| <i>Ciska Waalewijn</i> | Policy officer | Municipality of Zwolle |
| <i>Hanna de Weerd</i> | Environment manager | Water board (Drents-Overijsselse Delta) |

Table 1: Participants interviews

4.3 Ethical considerations

During the beginning of the research, it was decided that every participant should feel comfortable with the interview. This was one of the main reasons to schedule the interviews on a participant desired location and speak with them separately to let them talk freely, also because the project is politically sensitive. Before the interview forms of informed consent were used to inform the participants of its rights and whether the researcher was allowed to record the interview or use their names for quotes (see Appendix D). All the participants received a copy of the form with the contact details if they wanted to change their answers or withdraw from the research. By using the informed consent form and speaking one-on-one, the participant can say whatever they want about the project and if they wished anonymity would be taken seriously.

4.4 Data analysis

After each interview was conducted the researcher transcribed every interview (see Appendix E). After transcribing was done, Atlas.ti was used for the coding. With coding, it is possible to deduct a variety of patterns, and by identifying these patterns, it is possible to make the data more coherent (Cope, 2010). In this research, the focus was on inductive coding. This means that codes are deducted from the interview itself and not from literature (see Appendix B for the code book and C for the code tree). The researcher chose inductive coding because not much research was done on integration and collaboration on a local scale and this type made it possible for the researcher to also tackle more subjects that were seen as important by the stakeholders. After coding, Atlas.ti was also used to generate the output used for the analysis.

4.5 Data quality

During the research, it could be noted that the participants were very enthusiastic about the topic and wanted to tell everything about the project resulting in a lot of data. Some participants gave very detailed, and in-depth responses. However, sometimes the participants weakened their answers because they did not want to be too negative about the other actors and they tried to stay more neutral. The data deducted from this research can however not be generalised as it is a qualitative case-study and the research is just about one project of the HWBP. The data collected however is of high quality and can thus be used for this research. The researcher, however, didn't have real influence on the process or its stakeholders within the project as the project is already in an advanced stage and some of the challenges that occurred during the project have already been changed positively in upcoming projects.

5. Results

In this chapter the results of the sub questions will be discussed, in chapter 6 'conclusions' the research question is answered.

5.1. Importance and roles of stakeholders

In this section the following question: "Who are the most important stakeholders and what are their roles in the project 'Stadsdijken Zwolle'? " will be answered. All the actors in the project are part of the so-called 'Bestuurlijke Begeleidings Groep' or BBG. Below the most important actors/stakeholders are mentioned, and their roles are discussed:

Water board (WDO-Delta): The water board has four different roles in the project according to the Environment manager: they are the initiator, the end-user, manager and are the owner of parts of the grounds surrounding the dikes. Compared to Bourblanc et al. (2013) there's a slight difference, the water board is responsible for implementation but doesn't fulfil an advisory role in the project, furthermore the water board is also responsible for the finances in this project.

Province of Overijssel: The role of the province as an organisation could be described as supportive, accompanying, reflectant and next to that it tries to incorporate more innovation in the project. Furthermore, the deputy is there to guide the process and to give advice and assistance where needed by the water board.

The municipality of Zwolle: The municipality does not have a decisive role in the project as the decisions are mostly located with the administrative board of the water board. The alderman, however, has an essential role in advising the water board which means that the municipality works closely together with the other actors to make plans. Spatial quality is seen as crucial by the municipality, and that is why the alderman tries to get it high on every agenda. Furthermore, the policy officer of the municipality is there to coordinate the activities that are asked of the municipality by the HWBP. In this way the municipality can check whether the ambitions are being met. The role of the municipality can thus be described as a proactive influencer, coordinator or advisor. However, the municipality has to approve permits for the projects thus the municipality has a significant dominance in the project.

Other stakeholders: stakeholders like Rijkswaterstaat, which is the principal of the government, as well as smaller groups of inhabitants and entrepreneurs are distinguished from the interviews, but they do not have a very decisive role in the process.

Some participants described the water board as one of the most dominant and essential actors as it is the initiator and has the task to reinforce the dikes and to partly finance the project themselves. However, the Alderman of the municipality of Zwolle described that the municipality could also have a dominant and essential position in decision-making:

“We have a crucial advisory role. Which means that people from the municipality work closely together with the water board to make plans possible, at the end the water board is in the lead. However, if our advice were negative, they would have had a problem of course.”

Ed Anker, Alderman municipality Zwolle

This positive advice of the BBG is needed to move on with the project. The water board tends to have a decisive and dominant role, and the other actors are there to advise them. But, without the support of the others, especially the municipality, the water board cannot continue their plans. This decisive factor of the municipality is also described by van den Hurk et al. (2014).

While the other actors mentioned the water board being the most dominant and essential actor in the process, within the organisation of the water board a difference of opinion between the dike ward and the environment manager could be noticed. The dike ward mentioned that the water board is heavily dependent on the management of the HBWP which decides how finances are divided and sees them as dominant. On the other hand, the environment manager considers the water board to be essential and more dominant but goes more in-depth than any other participant by saying the administrative board of the water board is the most dominant actor because they make the ultimate decisions.

Summarising, the water board, province, and municipality are the most important stakeholders in the project. Next to Rijkswaterstaat, smaller groups of inhabitants and entrepreneurs are also distinguished. However, an important central role can also be seen with the board of the HWBP, which divides finances for the HWBP programme. When looking at importance and dominance, most of the participants agree that the water board is the most dominant factor on the local level. In the project, however, it should also be noted that part of the dominance can even come from the municipality. If they give negative advice with regards to the permits, the water board cannot continue their plans, which is also stated by van den Hurk et al. (2014). The participants from the water board gave an either even more in-depth and elaborate explanation on importance and domination or said that another actor was dominant and vital for them. However, it can be concluded that the water board is the real dominant and the utmost important stakeholder on the local level of all the stakeholders distinguished.

5.2. Collaboration and integration

In this section the following question: To which degree are spatial planning and water management integrated in the project 'Stadsdijken Zwolle'? Will be answered.

Rijke et al. (2012) described in their article that governance approaches of Room for the River were to be an example for the new Delta Programme and Wiering & Immink (2006) explain that in the new Delta Programme spatial planning and water management will be integrated instead of purely focusing on technical expertise. This means that the HWBP which is a part of the Delta Programme would have a high degree of collaboration and integration.

In the project 'Stadsdijken Zwolle' there is indeed a degree of collaboration in the project. The collaboration is quite intensive, and on every level of the organisations, there is an exchange of information. However, there's no self-managing team consisting of experts from different partners. The most intensive collaboration is one between the water board and the municipality because the municipality has the expertise of working on a local level with its inhabitants and the municipality can link local challenges to the water safety programme (Rijke et al., 2012) which in turn can result in more support (Arvai, 2003 in Baan & Klijn, 2004). There is also much interest to work together even more in the future to make use of everyone's expertise. When looking at the degree of integration in the project a different situation can be seen:

"The new HWBP has stopped with multifunctionality, so the HWBP is all about safety!"

Hans de Jong, Ad interim dike ward

This is precisely what has been said by Jorissen et al. (2016), spatial quality is no formal goal anymore. Even though there is a possibility for further integration, it is no real goal because of the finances of the project. The water board will not fund further integration, the investments for integration has to come from external parties. Other participants, like the deputy, do have the belief that multifunctionality will arise in the project as there might be chances for the municipality or even entrepreneurs to invest.

However, if we compare the project to for example Room for the river and their multifunctionality almost all of the participants agree that it will not be the same. Again, it is all about the objective of the HWBP. Room for the river was seen as too expensive, and that is why the aim of HWBP changed. The collaboration and integration can thus be described as 'business-like' and 'searching', which implies that the stakeholders were searching for the type of collaboration and integration needed to be used because it is the first more significant HWBP project and because people are used to Room for the River.

There is a high degree of collaboration on different levels, but there's no self-managing team for the project. The plan lacks integration and is therefore not comparable to projects like Room for the river, the reason for this lack of integration is because of the finances of the HWBP. Most of the actors joined the BBG by representing their institutions which is different than stated by van der Brugge et al. (2005). However, all participants agree upon the fact that the integration at 'Stadsdijken Zwolle' could be improved even further. They all agree that it would be much easier to have a diverse team of experts and different actors in the project, which can avoid a narrow, short-

term focus (van der Brugge et al., 2005). The alderman also advised that the perspective of Room for the River should be returned to the HWBP. Another thing that is noted by the policy officer of the municipality is that the process might be easier if there were just a little amount of money to add some small things that could improve spatial quality. Furthermore, it is essential to understand and listen more to each other's interests as the involvement of different stakeholders is a complex and interactive procedure (Basco-Carrera et al., 2017). It can be concluded that the project lies in between co-design and discussion in the ladder of participation (Basco-Carrera et al., 2017), there is an interactive relationship between the stakeholders and the stakeholders feel committed, but there's no big mandate to act as the water board is the stakeholder that makes the final decisions, however according to the model high participation is taking place. When looking at the Cooperation Continuum the project is comparable to coordination (Sadoff & Grey 2005, in Basco-Carrera et al., 2017), within the projects there is regular communication between actors to solve clashing ideas. However, there is no shared-learning. When combining both of the models in the categorisation of involvement by Basco-Carrera et al. (2017), it can be concluded that the stakeholders can be seen as key stakeholders in the project (see the red box, figure 9).

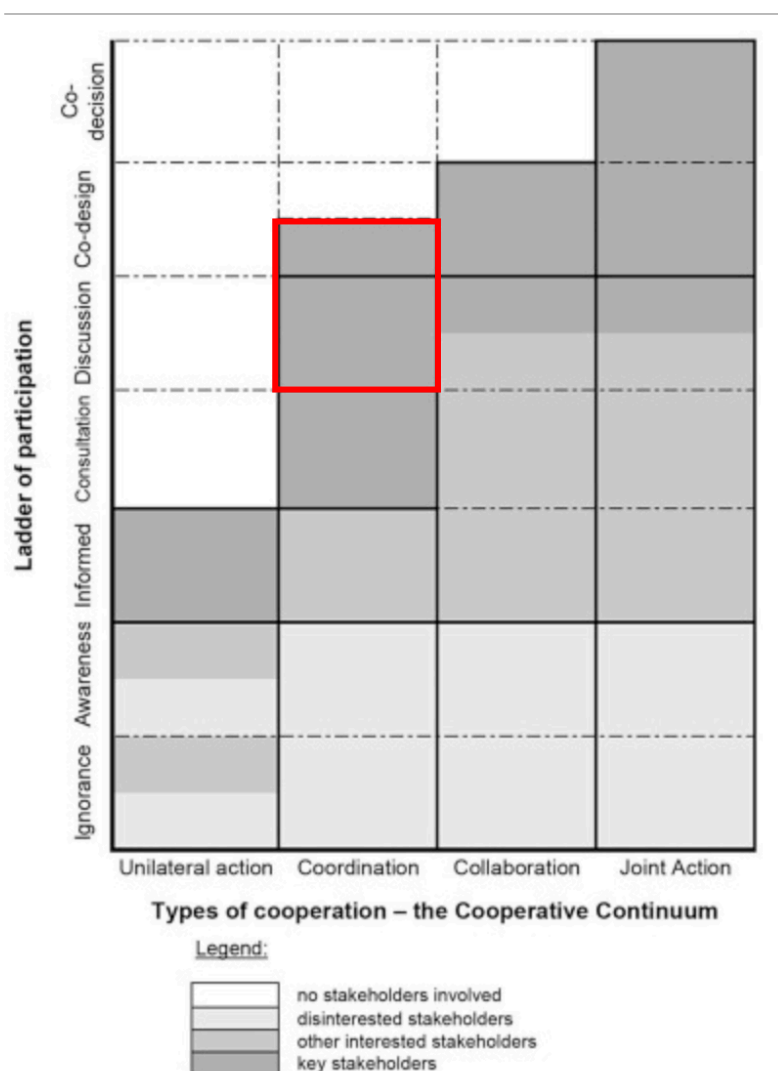


Figure 9: Categorization of involvement of stakeholders (Basco-Carrera et al., 2017)

5.3. Challenges and benefits of integration

In this section the following question: What are the challenges and success factors of the integration of spatial planning and water management in the project 'Stadsdijken Zwolle'? is answered.

As with every project 'Stadsdijken Zwolle' has its challenges in collaboration and integration and has to overcome hurdles, just as emphasised by van Herk et al. (2015). The process demands a continuous awareness according to the environment manager. By further integration, there's a chance that there will be more innovation resulting in a future-proof dike which has added value for Zwolle, which is also stated by van Loon-Steensma & Vellinga (2014, in Ritzema & van Loon-Steensma, 2018). However, the integral approach has its boundaries:

"The more integrated, the better, but I always say: be aware, integration at its peak is comparable to stagnation!"

Bert Boerman, Deputy province of Overijssel

When comparing the collaboration with the model of Sadoff & Grey (2005, in Basco-Carrera et al., 2017), it could already be concluded that the level of collaboration is comparable to coordination which entails regular communication and negotiations. When returning to the quote of the deputy, the same is stated by van der Valk (2002) namely that: too many negotiations have its downsides with delayed and complex procedures. However, too few negotiations are also a problem. This problem also occurred in the project while a critical decision had to be made it was silent. This resulted in a tense situation between the actors, which was because the other actors felt they were not informed enough and they were losing their influence on the process.

The challenges about integration and collaboration seemed to revolve around one quote, which is applied a lot in the HWBP which is: "reasonable and efficient" which creates rigidity in the process:

"It has been said in meetings 100 times: it needs to be reasonable and efficient, it is just irritating to keep on saying that."

Hans de Jong, Ad interim dike ward

The quote means that the water board will focus on water safety and will not pay for extras such as spatial quality, this is also mentioned by Jorissen et al. (2016). This quotation somehow creates tension between the different actors. In turn, the Alderman also has its opinion about the quote and resists against it:

"Spatial quality should be involved from the beginning, it's not something extra. Kill reasonable and efficient right now or the day before yesterday!! The terminology is driving me crazy, and it influences the organization. [...] "Reasonable and efficient"... that's something that you don't have to tell us, what nonsense! [...] It kills creativity, and I think that's a shame."

Ed Anker, Alderman municipality Zwolle

However, all stakeholders seemed to be very positive about further collaboration or integration, and they all agreed that more collaboration and integration in the project

could help improve communication and integrate knowledge. Furthermore, the climate adaptation measures will ultimately improve the overall quality of the area (Swart et al., 2013 & van Alphen, 2016). Another benefit mentioned is when the civil services work together intensively it becomes more tempting for administrators to act upon that. More collaboration also resulted in a change of behaviour of the water board. The water board left its so-called 'ivory tower' and is open to even more collaboration. However, even though the water board is opening up, it still intends to maintain its power position in the project which is the same process as described by Arts (2006, in Rijke et al., 2012).

6. Conclusion

In this chapter the research question: “How does collaboration in dike reinforcement contribute to both spatial quality and water safety in the city of Zwolle?” will be answered. The research has been done by collecting and analysing data from the five semi-structured interviews with the main stakeholders of the project.

6.1 The influence of collaboration in dike reinforcement

All the stakeholders in the project have various types of roles in the project, and all of them are members of the BBG. However, it could be noted that the board of the HWBP and the water board are the most important and dominant actors and the latter being the most important and dominant on the local level according to the participants. In the process of collaboration, the province and municipality have a more advisory role. However, the municipality has quite a dominant and essential part in the project. This is because the water board would need a positive advice of the BBG and thus needs permits of the municipality for its plans, this decisive and dominant role of the municipality was also described by van den Hurk et al. (2014).

The different actors in the project ‘Stadsdijken Zwolle’ work in quite a high degree of collaboration and there is the incentive to try and improve the spatial quality. However, the different actors are bounded to the rigid policies of the HWBP programme with “reasonable and efficient” as objective. Furthermore, spatial quality is no formal goal of the HWBP (Jorissen et al., 2016) and according to the participants, this results in tense situations in the collaboration between the various actors. Furthermore, according to participation ladder, the project lies between co-design and discussion, because there’s an interactive relationship and stakeholders feel committed. However, the other stakeholders have no mandate to act (Basco-Carrera et al., 2017). The cooperation continuum showed that the level of collaboration was to comparable coordination because of the regular communication (Sadoff & Grey 2005, in Basco-Carrera et al., 2017). When combining the models, the different actors could be categorised as key stakeholders in the process (Basco-Carrera et al. (2017).

Even though there were challenges in the process of collaboration and integration, many stakeholders were positive about further integration and collaboration. In the project, this has already resulted in close collaboration between the municipality and the water board, as the water board stepped out of its so-called ‘ivory tower’. However, it still tries to maintain its power position (Arts 2006, in Rijke et al., 2012).

It was concluded earlier that dike reinforcements would inevitably influence the spatial quality of the surrounding areas (Klijn et al., 2013 in Nillesen & Kok, 2015). By collaborating in the BBG however, the different actors are looking for collaborative processes in which multiple stakeholders address challenges. With this collaboration, new multifunctional affiliations can be found in which water is linked to spatial quality (Wiering & Immink, 2006). The collaboration between various stakeholders thus makes it possible to ultimately increase support (Arvai, 2003 in Baan & Klijn, 2004) by integrating stakeholders to find new ideas to improve both spatial quality and water safety. According to the researcher, the water board should open up even more for the other stakeholders to make more integration and collaboration possible. Furthermore, spatial quality should be integrated from the beginning of the project.

6.2 Future research

It is not possible to draw a hard conclusion from this research about the integration and collaboration in the whole of the HWBP as this case-study involved just one project, just as the project is still ongoing and different factors could change. However, this research could be an input for future research on this topic. For future research on this topic, the researcher would advise to take multiple projects within the HWBP but also to reduce the number of questions and codes. More focus on core-questions would give the most important information to see whether more projects follow the same path of integration and collaboration as 'Stadsdijken Zwolle' and how the stakeholders perceive this paradigm change.

6.3 Reflection

Finally, it is essential to reflect on the research and the process of collecting the data. As a researcher much is learned from the interviews and the research process. It is important to always build up an excellent theoretical framework as it can help a lot. The research went quite well, and it was easy to find contact with the different stakeholders and actors involved in the project. However, when analysing making good codes was sometimes difficult, mostly because of the amount of data that was collected.

Another thing was that the way the questions were asked could have been differently: there was sometimes confusion on what sort of integration was meant, and sometimes there was a different interpretation of the term "stakeholders or actor". Furthermore, the number of questions could have been reduced for the bachelor thesis as sometimes there was information given that the researcher did not need, consequently when having less output, the number of codes can thus be reduced too.

References

- Alphen, J. van (2016). The Delta Programme and Updated Flood Risk Management Policies in The Netherlands. *Journal of Flood Risk Management*, 9(4), 310-319.
- Baan, P.J.A. & Klijn, F. (2004). Flood risk perception and implications for flood risk management in the Netherlands. *International Journal of River Basin Management*, 2(2), 113-122.
- Basco-Carrera, L., Warren, A., Beek, E. van, Jonoski, A., Giardino, A. (2017). Collaborative modelling or participatory modelling? A framework for water resources management. *Environmental Modelling & Software*, 91, 95-110.
- Bourblanc, M., Crabbé, A., Liefferink, D. & Wiering, M. (2013). The marathon of the hare and the tortoise: implementing the EU Water Framework Directive. *Journal for Environmental Planning and Management*, 56(10), 1449-1467.
- Brugge, R. van der, Rotmans, J. & Loorbach, D. (2005). The transition in Dutch water management. *Regional Environmental Change*, 5, 164-176.
- Clifford, N., French, S., Valentine, G. (2010). *Key Methods in Geography*. 2nd edition. Thousand Oaks: SAGE.
- Cope, M. (2010). Coding transcripts and diaries. In N. Clifford, S. French & G. Valentine (Red.), *Key Methods in Geography*, (pp. 440-452). Thousand Oaks: SAGE.
- H+N+S Landschapsarchitecten, (n.d.). *Ruimtelijke kwaliteit Stadsdijken Zwolle*. Accessed on 12-12-2018 via <http://www.hnsland.nl/nl/projects/stadsdijken-zwolle>
- Herk, S. van, Rijke, J., Zevenbergen, C. & Ashley, R. (2015). Understanding the transition to integrated flood risk management in the Netherlands. *Environmental innovation and societal transitions*, 15, 84-100.
- Hurk, M. van den, Mastenbroek, E. & Meijerink, S. (2014). Water safety and spatial development: An institutional comparison between the United Kingdom and the Netherlands. *Land use policy*, 36, 416-426.
- IPCC. (n.d.). *Deltaic coasts*. Accessed on 28-09-2018 via <http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=294>
- Jorissen, R., Kraaij, E. & Tromp, E. (2016). Dutch flood protection policy and measures based on risk assessment. *FLOODrisk2016*, 20016.
- Klijn, F., Bruin, D. De, Hoog, M.C. De, Jansen, S. & Sijmons, D.F. (2013). Design quality of room-for-the-river measures in the Netherlands: role and assessment of the quality team (Q-team). *International Journal of River Basin Management*, 11(3), 287-299.

Longhurst, R. (2010). Semi-structured interviews and Focus Groups. In N. Clifford, S. French & G. Valentine (Red.), *Key Methods in Geography*, (pp. 103-115). Thousand Oaks: SAGE.

Meijerink, S. & Dicke, W. (2008). Shifts in the public-private divide in flood risk management. *International Journal of Water Resources Development*, 24(4), 499-512.

Neuvel, J.M.M. & Brink, A. van den (2009). Flood risk management in Dutch local spatial planning practices. *Journal of Environmental Planning and Management*, 52(7), 865-880.

Nillesen, A.L. & Kok, M. (2015). An integrated approach to flood risk management and spatial quality for a Netherlands' river polder area. *Mitigation and Adaptation Strategies for Global Change*, 20, 949-966.

Rijke, J., Van Herk, S., Zevenberg, C. & Ashley, R. (2012). Room for the river: delivering integrated river basin management in the Netherlands. *Intl. J. River Basin Management*, 10(4), 369-382.

Ritzema, H.P. & Loon-Steensma, J.M. van (2018). Coping with Climate change in a densely populated delta: a paradigm shift in flood and water management in the Netherlands. *Irrigation and Drainage*, 67(1), 52-65.

Runhaar, H., Mees, H., Wardekker, A., Sluijs, J. van der & Driessen, P. (2012). Adaptation to climate change-related risks in Dutch urban areas: stimuli and barriers. *Regional environmental change*, 12, 777-790.

Stokkom, H. van, Smits, A. & Leuven, R. (2005). Flood defense in the Netherlands. *Water international*, 30(1), 76-87.

Swart, R., Seede, A.G.J., Pater, F. de, Goosen, H., Pijnappels, M. & Vellinga, P. (2013). Climate-Proofing Spatial Planning and Water Management Projects: An Analysis of 100 Local and Regional Projects in the Netherlands. *Journal of Environmental Policy & Planning*, 16(1), 55-74.

Valk, A. van der (2002). The Dutch Planning Experience. *Landscape and Urban Planning*, 58, 201-210.

Vis, M., Klijn, F., Bruijn, K.M. de & Buuren, M. van (2003). Resilience strategies for flood risk management in the Netherlands. *Int. J. River Basin Management*, 1(1), 33-40.

WDO-delta.nl. (n.d.). *Stadsdijken Zwolle (HWBP)*. Accessed on 25-09-2018 via <https://www.wdodelta.nl/projecten/hwbp-projecten/stadsdijken-zwolle/>

Wiering, M. & Immink, I. (2006). When water management meets spatial planning: a policy-arrangements perspective. *Environmental and Planning C: Government and Policy*, 24, 423-438.

Woltjer, J. & Al, N. (2007). Integrating Water Management and Spatial Planning. *Journal of the American Planning Association*, 73(2), 211-222.

Appendix

Appendix A: Interview guide

Introductie

- “Bedankt voor uw medewerking”
- Voorstellen van mezelf
- Persoonlijke doel van de studie uitleggen en doel van onderzoek uitleggen.
- Geïnterviewde wijzen op het toestemmingsformulier en zijn/haar rechten.
- Toestemmingsformulier laten ondertekenen.
- Uitleg over opbouw van het interview

Algemeen:

1. Kunt u zichzelf introduceren?

- a. Welke rol vervult u binnen het project?
 - PQ: “Kunt u dit nader uitleggen?”
- b. Hoe zou u het project ‘Stadsdijken Zwolle’ in enkele korte zinnen beschrijven?
 - PQ: “Kunt u dit nader uitleggen?”

Betrokkenheid

2. Wie zijn volgens u de belangrijkste stakeholders binnen het project?

- a. Welke actor binnen het project beschouwt u als de belangrijkste actor?
 - PQ: “Kunt u dit nader uitleggen?”
- b. In hoeverre speelt deze actor, naar uw mening, een dominante rol in het project?
 - PQ: **Dominante rol?** -> ‘PQ: “Hoe ervaart u de dominantie? Belemmert dit u in de samenwerking?”
 - PQ: “Kunt u hier een voorbeeld van geven?”
- c. Hoe zal u de rol van uw organisatie beschrijven binnen het project ‘Stadsdijken Zwolle’?
 - PQ: “Kunt u dit nader uitleggen?”
 - PQ: “Kunt u hier een voorbeeld van geven?”

Mate van integratie & samenwerking

Tegenwoordig valt te zien dat binnen projecten van het Delta Programma steeds meer een integratie plaatsvindt van ruimtelijke ordening & watermanagement hierbij wordt ervoor gezorgd dat er voor beide vakgebieden een vooruitgang wordt geboekt binnen het desbetreffende project. Dit valt ook te zien bij projecten binnen Ruimte voor de Rivier. Dit betekent tevens dat verschillende medewerkers van organisaties en ambtenaren met elkaar moeten gaan samenwerken en zich moeten aanpassen op elkaar, hiervan valt natuurlijk te verwachten dat er onenigheid/meningsverschillen ontstaan omdat men een andere manier van werken gewend is dan collega’s van een ander vakgebied en organisatie.

3. In hoeverre vindt u dat eenzelfde soort integratie, als bij projecten zoals Ruimte voor de Rivier, tevens plaatsvindt of zal gaan plaatsvinden bij het project Stadsdijken Zwolle?

- a. Wat is uw persoonlijke mening over integratie van verschillende actoren en vakgebieden?
 - PQ: “Wat is de mening van uw organisatie betreffende de integratie?”
 - PQ: “Kunt u hier een voorbeeld van geven?”
 - PQ: “Wat bedoelt u met ... ” < afhankelijk van antwoord >

- b. Op welke wijze ervaart u dat actoren binnen de vakgebieden watermanagement en ruimtelijke ordening met elkaar geïntegreerd zijn?
 - PQ: "Kunt u hier een voorbeeld van geven?"
 - PQ: "Hoe ervaart uw organisatie dit?"
 - PQ: "Wat bedoelt u met ... " < afhankelijk van antwoord >

4. Kunt u iets vertellen over de mate van samenwerking tussen de verschillende actoren?

- a. Hoe ervaart u samenwerking met collega's van andere actoren?
 - PQ: "Hoe denkt uw organisatie hierover?"
 - PQ: "Kunt u dit nader toelichten?"
- b. Met welke kernwoorden/termen zou u de samenwerking en integratie, binnen 'Stadsdijken Zwolle', tussen de verschillende actoren typeren?
 - PQ: "Kunt u nader uw keuze uitleggen?"
- c. Welke term zou u gebruiken voor de samenwerkingsvorm?
 - PQ: "Kunt u nader uw keuze uitleggen?"
- d. Welke rol speelt u in het bevorderen van de samenwerking en integratie van de verschillende beleidsvelden?
 - PQ: "Kunt u hiervan een voorbeeld geven?"
 - PQ: "Kunt u dit nader uitleggen?"
- e. Voorziet/ervaart u problemen in de samenwerking en integratie van verschillende actoren binnen het project?
 - PQ: "Welke problemen ervaart u?" <afhankelijk van antwoord>
 - PQ: "Wat is volgens u het grootste probleem?" <afhankelijk van antwoord>
 - PQ: "Kunt u dit nader uitleggen?" <afhankelijk van antwoord>
 - PQ: "Hoe denkt uw organisatie hierover?"
- f. Welke voordelen ziet u in de mate van samenwerking en integratie van stakeholders/actoren?
 - PQ: "Wat is volgens u het grootste voordeel?"
 - PQ: "Kunt u dit nader uitleggen?" <Afhankelijk van antwoord>
 - PQ: "Hoe denkt uw organisatie hierover?"
- g. In hoeverre bent u daarnaast van mening dat meer integratie en samenwerking waarde toevoegt aan het project 'Stadsdijken Zwolle'?
 - PQ: "Kunt u dit nader toelichten?"
 - PQ: "Kunt u een voorbeeld geven?"

Ruimtelijke kwaliteit & waterveiligheid

Als er werkelijk als zodanig een integratie plaatsvindt tussen de vakgebieden zullen er twee elementen gaan verbeteren als het project 'Stadsdijken Zwolle' is uitgevoerd. Dit zijn de ruimtelijke kwaliteit, gelinkt aan ruimtelijke ordening en waterveiligheid, gelinkt aan watermanagement.

5. Wat is uw verwachting van de verbetering van de waterveiligheid door het project 'Stadsdijken Zwolle'?

- PQ: "Hoe denkt uw organisatie hierover?"
- PQ: "Kunt u hier een voorbeeld van geven?"
- PQ: "Wat bedoelt u met...? "

- a. Met welke kernwoorden zou u de verbetering typeren?
- PQ: "Kunt u dit nader toelichten?"

6. In hoeverre bent u van mening dat integratie en toenemende samenwerking leidt tot meer ruimtelijke kwaliteit?

- PQ: "Hoe denkt uw organisatie hierover?"
 - PQ: "Kunt u een voorbeeld geven?"
- a. In welke mate en op welke wijze verwacht u dat de ruimtelijke kwaliteit van het omliggende gebied zal toenemen door het project 'Stadsdijken Zwolle'?
- PQ: "Kunt u dit verder toelichten?"
 - PQ: "Kunt u een voorbeeld geven?"
 - PQ: "Hoe denkt uw organisatie hierover?"
- b. Met welke kernwoorden zou u de verbetering typeren?
- PQ: "Kunt u dit nader toelichten?"

Conclusie

7. Hoe stelt u voor dat het proces van integratie en samenwerking van actoren en vakgebieden in de toekomst nog verder verbeterd kan worden?

- PQ: "Kunt u hier een voorbeeld van geven?"
- PQ: "Hoe denkt uw organisatie hierover?"
- PQ: "Wat bedoelt u met... " " <Afhankelijk van antwoord>

Afronding

8. Als laatste zal ik nog willen vragen of u nog wat toe te voegen heeft aan het interview?

- "Bedankt voor het interview"
- Nogmaals wijzen op ethiek en informed consent
- Bent u geïnteresseerd in de eindversie van deze scriptie?
- Mocht u verder nog vragen hebben dan zal ik te bereikbaar zijn via: thombult@hotmail.com & 0620067164

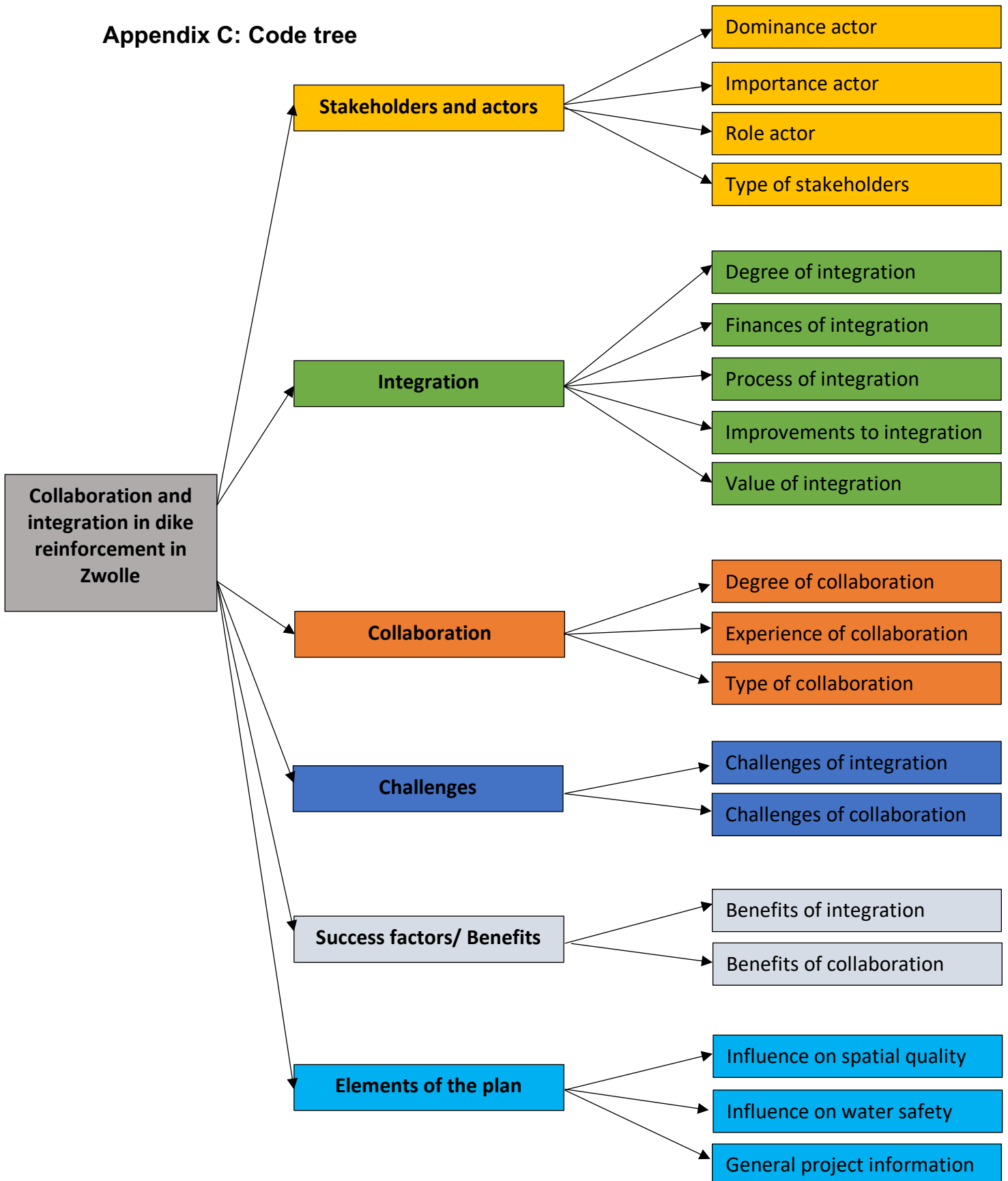
Appendix B: Codebook

| Code groups | Codes | Explanation |
|---------------------------|------------------------------|--|
| Stakeholders and actors | Dominance actor | Next to importance, this code can make a further elaboration possible of the role of the actor. |
| | Importance actor | Answers SubQ1: makes it possible to distinguish the most important actors in the project |
| | Role actor | Answers SubQ1: Makes it possible to distinguish the different roles of actors. |
| | Type of stakeholders | Answers SubQ1: makes it possible to distinguish the different stakeholders in the project. |
| Degree of integration | Degree of integration | Answers SubQ2: makes it possible to distinguish how the different actors feel the project is integrated. |
| | Finances of integration | Important because finances play a very important role in the integration of this project. |
| | Process of integration | Answers SubQ2: makes it possible to distinguish between different opinions about the process of integration. |
| | Improvements to integration | Makes it possible to further elaborate on things that could be changed in the future process of integration. |
| | Value of integration | Makes it possible to really see how the participants experience the integration process. |
| Degree of collaboration | Degree of collaboration | Answers SubQ2: Next to the integration the collaboration is also very important. |
| | Experience of collaboration | Gives extra information about how the type of collaboration is experienced by stakeholders |
| | Type of collaboration | Makes it possible to distinguish the different types of collaboration in the project and whether the actors experience this differently. |
| Challenges | Challenges of integration | Answers SubQ3 |
| | Challenges of collaboration | Answers SubQ3 |
| Benefits/ success factors | Benefits of integration | Answers SubQ3 |
| | Benefits of collaboration | Answers SubQ3 |
| Elements of the plan | Influence on spatial quality | Answers research question: combined with other codes |
| | Influence on water safety | Answers research question: combined with other codes |
| | General project information | Gives extra project information that can be used for other chapters and as background-info |

* All codes are inductive

** Colors of the code group correspond with the colors of the code tree (Appendix C)

Appendix C: Code tree



Appendix D: Informed consent form

Hartelijk dank dat u de moeite wil doen om mee te doen aan het onderzoek over het project Stadsdijken Zwolle op de basis van de volgende onderzoeksvraag:

- *How does collaboration in dike reinforcement contribute to both spatial quality and water safety in the city of Zwolle?*

Het onderzoek wordt uitgevoerd als onderdeel van een afstudeerscriptie voor de opleiding Technische Planologie (EN: Spatial Planning & Design) aan de Rijksuniversiteit Groningen.

Allereerst is het van belang dat u van het volgende op de hoogte bent:

- De antwoorden die u geeft zullen alleen gebruikt worden voor het onderzoek en niet voor ander doeleinden.
- Er dient met nadruk vermeld te worden dat deze scriptie niet in opdracht van WDO-Delta wordt uitgevoerd.
- U kunt tussentijds op de hoogte gehouden worden van de resultaten. De eindversie van de scriptie deel ik tevens graag met u.
- U kunt te allen tijde besluiten om te stoppen met het interview, ook nadat het interview heeft plaatsgevonden.
- Wilt u bepaalde vragen in het interview niet beantwoorden? Geef dit aan dan zullen ze niet behandeld worden.

Tenslotte zou ik u willen vragen de volgende twee vragen te beantwoorden:

1. *Gaat u akkoord met het feit dat het interview wordt opgenomen ten behoeve latere data-analyse?*

JA NEE

2. *Mogen uw voornaam en achternaam gebruikt worden in de scriptie en gekoppeld worden aan een citaat?*

BEIDE ALLEEN VOORNAAM ALLEEN ACHTERNAAM GEEN VAN BEIDE
(ANONIEM)

Ondergetekenden verklaren dit document te hebben gelezen en begrepen te hebben.

Handtekening onderzoeker:

Thom Bult
thombult@hotmail.com
 06-20067164

Handtekening deelnemer:

[Voornaam, achternaam]
 [Functie, organisatie]

Getekend op te Zwolle

Appendix E: Interview transcripts

Not added to this version

Transcriptions have been send to the supervisor via email.