

A large, dynamic splash of water in shades of light blue and white, centered on a white background. The splash is composed of many smaller droplets and larger, flowing streams of water, creating a sense of movement and energy. The water appears to be splashing upwards and outwards from a central point.

# **The OECD Water Governance Principles**

*Useful or useless for the local scale?*

Nadine Keller

Master thesis Spatial Planning

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*Images front page: Katanga-Media (2017)*

***"Good water governance is a prerequisite to improve water management all over the world"***  
(Water Governance Centre, 2016, p. 6).

# Colophon

## The OECD Principles on Water Governance: Useful or useless for the local scale?

Name: Nadine Keller  
Student number: 3963829  
E-mail: nadine.keller@hotmail.com

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Master Spatial Planning

Faculty of Geosciences

Utrecht University

Utrecht, 23 November 2017

Supervisor: dr. Thomas Hartmann

E-mail: t.hartmann@uu.nl

Internship: Waterschap Rivierenland, Tiel

Supervisor: Daan Willems

E-mail: d.willems@wsrl.nl



**Utrecht University**

**Waterschap**

**Rivierenland**



## Preface

In front of you, you will find my Master Thesis about the usefulness of the OECD Principles on Water Governance on the local scale. This topic came forward out of my interest for the subject 'water'. One of the first questions my supervisor dr. Thomas Hartmann asked me was: What is it exactly that you find so interesting about water? I think, the interesting thing about water, in the Netherlands anyway, is that water always influences spatial processes. Water is always of importance, you cannot ignore it. For this reason, it is important to manage water as good as possible. This is not always easy because of the large amount of different actors who are present in the water field. Luckily, solutions are in development to coordinate the governance of water in the best possible way. One tool that maybe can help improve water governance is the framework of the OECD Principles on Water Governance, invented in 2015. This provided a beautiful subject for my thesis: examining how these principles fit a scale in the Netherlands where water governance plays a very important role: the local scale.

I have written my thesis partly during a six month internship at Waterschap Rivierenland, located in Tiel. During my internship I worked on the project Focusgebied Linge (or as it is named in the rest of this thesis: Focus area Linge). I also used this project as case study in my research, so you will read a lot about this project in this thesis. During my internship I learned a lot about the tasks of the regional water authorities in the Netherlands and many colleagues offered me the chance to go with them and showed me all sides of their job. This made me so enthusiastic that I will be working as a trainee for the next two years for the regional water authorities, starting in Januaray. Without this internship, I could not have written my thesis, so I want to thank my supervisor Daan Willems for offering me this chance and for all the moments talking about my thesis to help me further in the process.

Beside my internship, this thesis brought me another educational and really fun experience. In the beginning of July I was allowed to be present at the 9th Meeting on Water Governance of the OECD in Paris. I even had been asked to say a few words about my master thesis. This experience was very valuable for my master thesis and also helped me to step outside of my comfort zone sometimes. For this I would like to thank my thesis supervisor dr. Thomas Hartmann, because you encouraged me to go to this event and it was an experience I would have not wanted to miss. In addition to this I would like to thank you for all of your insights and urging me to have some faith in my own skills, something I frequently doubt.

Finally I would like to thank my parents, sister and my friends for listening to my thoughts and (sometimes) complaints. All your advice, help and support in this process were very valuable for me. I hope you will find my thesis interesting and that the results will be useful for future water governance practices.

I hope you will enjoy reading my master thesis.

Nadine Keller

## Executive summary

The past two decades have witnessed increasing global concern about the need for sustainable water and land management in an era of rapid change, and persistent water and food insecurity. The global water reality poses serious and increasing challenges. Water professionals in the Netherlands experience every day that water is a limited and highly variable resource, involving constraints and risks of too much, too little or too polluted water day. Good water governance is a prerequisite to improve water management all over the world. The OECD developed twelve Principles on Water Governance which aim to enhance water governance systems and specifically improve the process from policy design to implementation. The aim of the twelve Principles on Water Governance is that they can set reform processes into motion at all levels of government to facilitate change where and when needed. However, it is not clear how to apply these principles at such a small scale and how these principles enhance water governance on the local scale. The major objective of this research is therefore to examine how the OECD Principles on Water Governance are received in practice on the local scale. This results in the following main question:

***How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with this (mis)fit?***

Examining how the OECD governance principles fit water governance on the local scale in the Netherlands involves collecting experiences from people who are concerned with water governance on the local scale. Therefore to examine this question this research uses a combination of literature study with an explanatory case study of a project about the Linge river, a small river in the management area of the regional water authority Waterschap Rivierenland.

To examine how the twelve OECD principles fit the local scale first water governance challenges on the local are being examined. The Linge case shows that one of the most outstanding challenges on the local scale is that water is not a priority task of the municipalities, because municipalities have many other tasks which need their attention. This often causes a mismatch between the wish of the regional water authorities for this more horizontal relation and cooperation and the capability of municipalities to answer this wish. This is also the reason that municipalities stand critically against the OECD governance principles. When examining the influence of the principles separately in this case, it seems that some of them are already used, however in a unconscious way because no one of the interviewees was aware of the existence of the principles. A distinction can be seen in the willingness to understand the principles. The water managers tend to have barely any knowledge of the principles, but they have at least some understanding for the principles. Municipalities on the other hand don't have a clue for how they should use the principles and they don't have the will for understanding the principles either. So, even in the Netherlands, at least in this case study, the Principles on Water Governance are kind of a fragmented picture on the local scale. The OECD principles do not entirely fit the local scale.

To cope with this misfit in this case there are two options. The first option is to reconsider the generality of this framework because in their current form the principles are useless for municipalities on the local scale. This misfit of the OECD Principles on Water Governance to the local scale stresses the need for a further translation of the principles from their abstract level to the locational specific context, so they are applicable to the local scale. The second option is to only focus on the regional water authorities when implementing the principles, so that the water authorities can translate them in an appropriate way to the municipalities and other actors involved in water governance at the local scale. Overall, this research strengthens the idea that the Principles on Water Governance in theory are a useful, fine robust framework to hold on to when implementing new policies or strategies. However, the OECD principles are still very new, so there is a need for more practical examples to discover how these principles do work out in practice.

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# Chapter 1: Introduction

*"No one is against good water governance. In fact, [...] water governance has emerged as perhaps the most important topic in the international water community in the 21<sup>st</sup> century" (Lautze, 2014, p. 25).*

The past two decades have witnessed increasing global concern about the need for sustainable water and land management in an era of rapid change, and persistent water and food insecurity (Pahl-Wostl et al., 2013). The world will face a large water crisis in the coming years because of the physical scarcity of this resource, which will cause wars between nations. However, unlike oil, gas and coal which are non-renewable resources and which once used can no longer be reused, water is a renewable resource, which can be used and then reused several times with good governance (Biswas & Tortajada, 2010). The Global Water Partnership (2000) also stated that *"a water crisis is often a crisis of governance"*. Water problems are becoming increasingly more and more interconnected and intertwined with other development-related issues, and also with social, economic, environmental, legal and political considerations, at local and national levels, and sometimes even at local and international levels (Biswas, 2008). The global water reality poses serious and increasing challenges. Water professionals in the Netherlands experience every day that water is a limited and highly variable resource, involving constraints and risks of too much, too little or too polluted water day (Unie van Waterschappen [UVW], 2017). Good water governance is a prerequisite to improve water management all over the world (Water Governance Centre, 2016).

*"Governments have a clear responsibility for the safety of inhabitants from flooding and the management of water resources. These tasks, not only require adequate funds, physical infrastructure and knowledge, but also a good institutional structure to be efficient and effective to engage stakeholders and to build trust. That is good water governance" (UVW, 2017, p. 9).*

## 1.1 Water governance

Thus water is a resource that is of direct interest to the society as a whole, as well as to most development-related public institutions, academia, private sector and non-governmental organizations (Biswas, 2008). Managing water as a resource properly is not only a question of money, but equally a matter of good governance (Organisation for Economic Cooperation and Development [OECD], n.d.; UVW, 2017.). In development circles, governance has played a role for a while, but it is only fairly recently that it has picked up significant meaning in the water sector. The water sector has been lagging behind many other sectors when it comes to introducing the concept of governance and its importance for sound development of water resources and related services (Tropp, 2007). One would indeed be hard-pressed to find any serious discussion of water governance prior to 2000 (Biswas & Tortajada, 2010). Within the international political arena the concept has evolved from being something that was close to a political taboo, to being more widely accepted as a critical issue that needs to be addressed (Tropp, 2007). Between 1980 and 2000, the outstanding paradigms for the water sector were sustainable water management and/or integrated water resources management, neither of which managed to make any long-term impact on the water sector. These two terms are being rapidly replaced by the term 'water governance' (Biswas & Tortajada, 2010).

The concept of water governance contributes to the design and implementation of policies, in a shared responsibility across levels of government, civil society, business and the broader range of stakeholders who have an important role to play alongside policy-makers to reap the economic, social and environmental benefits of good water governance (OECD, 2015). The notion of governance for water includes the ability to design public policies and institutional frameworks that are socially accepted and mobilise social resources in support of them (Rogers & Hall, 2003). To make water governance work at all levels, there is need for operationalisation frameworks that consider the short, medium and the long term of water governance in a consistent and a sustainable

way (OECD, 2015). Besides, there need to be more systematic approaches of how governance can be more easily understood and applied by water managers and decision-makers (Tropp, 2007). There is a lack of literature containing analysis of experiments in the field of water governance (Huitema et al., 2009). Also Pahl-Wostl et al. (2013) claim that there is a large absence of systematic comparative research on water governance systems. Beside these authors, also Rogers & Hall (2003) point out that there is a need for more effective water governance regimes to be designed, because water is not a simple economic good. Sometimes it is a public good, sometimes a private good and it often lies somewhere in between.

**1.2 OECD Principles on Water Governance**

The Organisation for Economic Cooperation and Development (in the rest of this research referred to as OECD) developed twelve Principles on Water Governance which aim to enhance water governance systems and specifically improve the process from policy design to implementation (OECD, 2015). The twelve principles intend to contribute to tangible and outcome-oriented public policies, based on three mutually reinforcing and complementary dimensions of water governance: effectiveness, efficiency and trust and engagement. Within the effectiveness theme there are capacity, policy coherence, appropriate scales within basin systems and clear roles and responsibilities. The efficiency part consists of data and information, financing, regulatory frameworks and the innovative governance principle. Finally, within the trust and engagement theme there are integrity and transparency, stakeholder engagement, trade-offs across users, rural and urban areas and generations and the monitoring and evaluation principle. The twelve governance principles can catalyse efforts for making good practices more visible, learning from international experience, and setting reform processes into motion at all levels of government to facilitate change where and when needed (Akhmouch & Correia, 2016).

**Overview of OECD Principles on Water Governance**

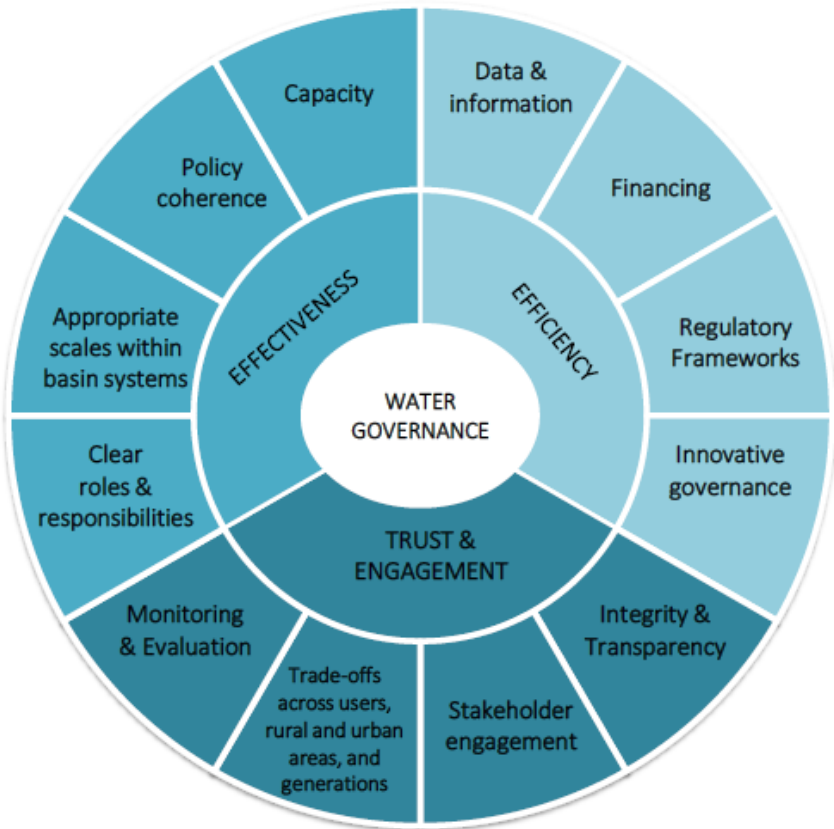


Figure 1 OECD Principles on Water Governance (OECD,

While a lot of research has been carried out on water governance (Tropp, 2007; Tortajada, 2010; Tortajada, 2010a; Rogers & Hall, 2003; Pahl-Wostl et al., 2010; Pahl-Wostl et al., 2013; Lautze et al., 2011; Hartmann & Spit, 2014), water governance in the Netherlands (OECD, 2014; van Buuren et al., 2010) and on the Principles on Water Governance (Akhmouch & Correia, 2016; Akhmouch & Clavreul, 2016), no single study exists which investigates the fit and usability of the Principles on Water Governance on the local scale. However, it is important to examine how the principles are received at such a small scale because the OECD claims that the principles enhance water governance systems and can be applied to all levels of government (Akhmouch & Correia, 2016). However, it is not clear how to apply these principles at such a small scale and how these principles enhance water governance on the local scale. The major objective of this research is therefore to examine how the OECD Principles on Water Governance are received in practice on the local scale, and add a valuable field analysis to the existing body of literature.

### 1.3 Main and sub-questions

The fact that all water issues are becoming more and more interconnected and the demand for a good and effective water governance framework encouraged the OECD to develop the OECD Principles on Water Governance. For the reason that these principles are relatively new, the OECD and the water sector want to gather knowledge about how these Principles on Water Governance work out in practice. This demand results in the following main question and three sub-questions:

***How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with this (mis)fit?***

- What are the water governance challenges on the local scale?
- How do the OECD governance principles influence water governance at a local scale?
- How to cope with the fit or misfit of the OECD Principles on Water Governance on a local scale?

This research uses the Principles on Water Governance, developed by the OECD, to analyse water governance on a local scale in the Netherlands. The main focus of this research lies on the on the Netherlands because in the Netherlands the paradigm shift to water governance is a current topic. At the moment, the Environmental Planning Act, expected to be adopted by 2019, is being developed in the Netherlands. This new act will set the water agenda in the Netherlands in a wider perspective and reach out of the water box (OECD, 2014). The Environmental Planning Act aims to foster a more integrated approach on the physical environment, more flexible decision making and faster and better project decision making. These goals will have serious consequences for water managers. More cooperation will be needed among governmental organisations and on top of that, there is a need for skills to address local flexibility with new developments and to enable citizens to participate in governmental projects (H2O, 2016).

The focus on local level is chosen for the reason that on the local level the regional water authorities are in charge when it comes to water in the Netherlands, they function at the same level as municipalities (see figure 2). The regional water authority is a government body of functional decentralised administration with its own governing body and financing structure, and it is solely concerned with the execution of tasks in the field of water governance (UVW, 2017). The regional water authorities manage regional water systems to maintain water levels, water quality and

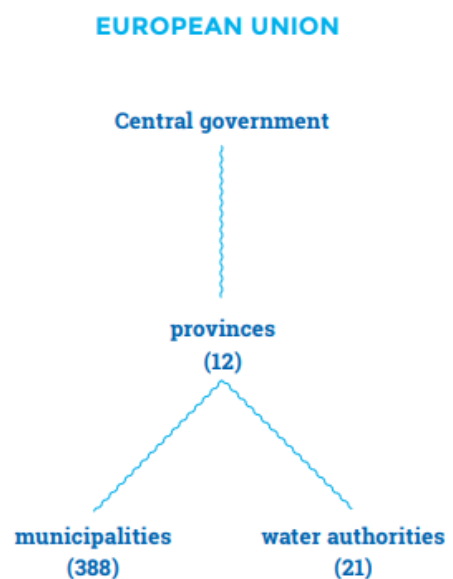


Figure 2 Constitutional position of the regional water authorities (UVW, 2017)

wastewater treatment (OECD, 2014). Regional water authorities are vital for the design and management of the Netherlands and for a healthy economic development (UVW, 2015). The regional water authorities are therefore one of the most important players in the water field. Due to the shift to more open water governance by introducing the new Environmental Act, water governance in The Netherlands is changing for the water authorities. The modern, energetic society asks for a serving regional water authority, which invests in an open and a horizontal network culture. Solving problems does not work any longer by only focussing on core tasks of the water authorities (UVW, 2015).

Specifically, the focus of this research lies at the Linge, a small river basin in the area of Waterschap Rivierenland. Waterschap Rivierenland has a lot of knowledge about the river area in the Netherlands and the hydraulic system (Waterschap Rivierenland, 2015) and Waterschap Rivierenland is trying to change the way they govern their water and implement a more open and horizontal attitude. This water authority aims to enhance a more integrated way of managing their water and Focus area Linge is one of their pilot projects for this (Waterschap Rivierenland, 2015). Because the principles also tries to enhance water governance systems, this is a perfect case to analyse if and how the principles are used in practice. The management area of Waterschap Rivierenland is shown in figure 3 on page 12.

### 1.3 Reading guide

This research does not contain a traditional chapter where the theoretical framework is being elaborated. After chapter 2, the methodological chapter, in chapter 3, 4 and 5 the different sub-questions are being described. Every one of these chapters will start with a small theoretical framework which provides a conceptual base to develop an answer to the sub-questions in combination with practical research. After answering the sub-questions, Chapter 6 presents an answer to the main question and describes the most important conclusions of this research. Finally, Chapter 7 provides recommendations for further research and some interesting questions about the OECD Principles on Water Governance framework.

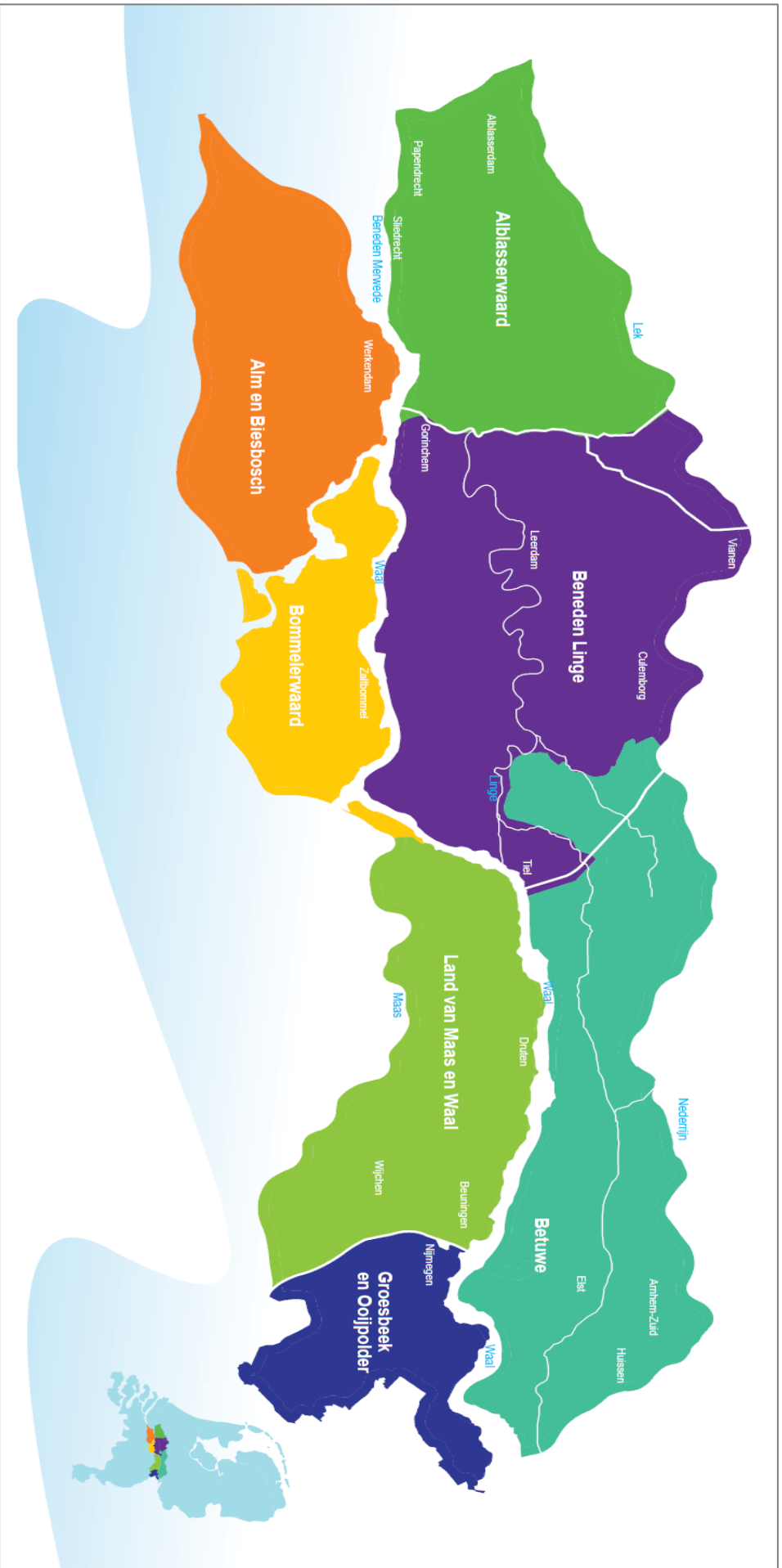


Figure 3 Management area of Waterschap Rivierenland (Waterschap Rivierenland, 2015)

# Chapter 2: Research methods

## 2.1 Research strategy

The research question 'How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with them?' is subdivided into three sub-questions to formulate an answer on the main question. The chosen research methods for each sub-question are explained in the following paragraphs. However, for this research in general qualitative methods are used.



Figure 4 Challenges for measuring water governance (OECD, 2015a)

Water governance is actually a bit hard to measure according to the OECD (2015a) because it is very complex, encompasses multiple dimensions and involves multiple actors at different levels of government, in the public and private sector. Besides, the context of water governance is also very uncertain. On top of that, it is also a bit hard to examine causal relations of water governance. It is difficult to be able to assess whether benefits are the results of certain actions implemented to achieve effective water governance (OECD, 2015a).

The OECD developed Water Governance Indicators [WGI] which can be helpful in tracking and measuring the Principles on Water Governance. However, the OECD experience is that only in depth and comprehensive analyses at local, basin or national levels can really provide a

compelling evaluation. Another reason for doing qualitative research is that there is little literature containing empirical analysis in the field of water governance (Huitema et al., 2009). Besides, it was considered that qualitative methods would usefully supplement and extend the more quantitative way in which water governance is generally examined nowadays. The OECD uses its information on a broad range of topics primarily to produce regular outlooks, annual overviews and comparative statistics (OECD, 2016). Qualitative research methods allow the researcher to deeply explore different perspectives and understand the how and why of a situation (Hennink et al., 2011). With qualitative research methods it is possible to deeply understand all different perspectives of how the OECD Principles on Water Governance fit the local scale and the underlying reasons why they fit water governance on the local scale the way they do.

Examining how the OECD governance principles fit water governance on the local scale in the Netherlands involves collecting experiences from people who are concerned with water governance on the local scale. It is about collecting experiences and views about the principles and how these principles work out at the local scale. Besides, to improve the OECD Principles on Water Governance framework, there is need for practical water governance examples. *"It is only because of experience with cases that one can at all move from being a beginner to being an expert"* (Flyvbjerg, 2006, p. 22). This research produces a qualitative example of how the principles are received on the local scale and also offers knowledge about how to cope with the fit or misfit of the principles. Also to answer this question experiences and in depth knowledge about the principles and water governance on the local scale are needed. When using quantitative methods it is not possible to explore to what extend

this fit or misfit of the OECD Principles on Water Governance is a serious problem and what reasons cause this misfit and what water governance experts views are on coping with this (mis)fit to the local scale. The following paragraphs will explain in detail the research methods used in for this research. Figure 9 on page 21 shows a schematic overview of the used methods for this research.

## 2.2 Case study

As part of these qualitative research methods, an explanatory case study (Zainal, 2007) is used to examine the OECD Principles on Water Governance closely both at a surface and deep level in order to explain how the OECD Principles on Water Governance fit the water governance context on the local scale. This case serves as an in depth example of how the principles fit water governance at the local scale. With this case study it is possible to understand how the principles are received at local scale and why they work out in practice the way they do. In this case study interviews will provide information from a variety of perspectives about the OECD governance principles and their usefulness in practice.

The case study for this research is done in the Netherlands because water governance is in The Netherlands an important issue. First of all because with the Water Act in 2009 eight different acts were combined to one (Rijksoverheid, n.d.) and secondly, in the near future (2019) the New Environmental Act will come into force, which raises opportunities and challenges in terms of encouraging vertical and horizontal coordination. The new Environmental Act intends to improve governance processes in general. At this moment, the environmental law is too complex and difficult for citizens and authorities to cope with (UVW, n.d.). An article about the new Environmental Planning Act ("De Omgevingswet, Uitgangspunten en doel van de wet", n.d.) points out that this act should replace all strategic plans by one integrated plan to be made by the central governance, including spatial planning, the environment, water and landscape. Thus, after the Water Management Act in 2009, which integrated eight different water acts, there is now a further going integration, with the incorporation of the Water Management Act in the new Environmental Act.

Due to the Water Act and now the new Environmental Act, water governance is changing and this is quite noticeable on local level, because regional water authorities are one of the most important players in the water management field in the Netherlands which you can see in figure 5. Regional Water Authorities are the main actor in the field of flood defence, drainage, water quantity, water quality and wastewater collection and treatment. All these tasks like dike reinforcement, managing the surface water quality and maintaining the right quantity of water in an area provide information about a water governance system. In all cases governance is needed because of stakeholder involvement and the coherence between water, land use and spatial planning. Besides, stakeholders ask the regional water authorities for more openness, transparency, active listening and thinking along (Unie van Waterschappen, 2015). This forces the regional water authorities to encourage cooperation with municipalities, provinces, other regional water authorities and the government.

Also the new environmental act forces regional water authorities to change their common closed attitude. The new environmental act goes beyond sector-specific legislation. It is based on co-actorship and shared responsibilities for efficient and effective environmental and water management. It introduces a duty of care for all competent authorities to work together and to take each other's responsibilities into account (OECD, 2014). In line of these thoughts, regional water authorities are forced to view their management areas from a different perspective. Regional water authorities are forced to focus at what an area needs, and not only from the tasks and competencies of the regional water authorities. According to an article about the new Environmental Planning Act ("Verandering op Omgevingswet: waterschappen: 'Blijf in gesprek met elkaar!", n.d.) it will become more important to look at an area in an integral way (Aan de slag met de omgevingswet.nl, n.d.-a).

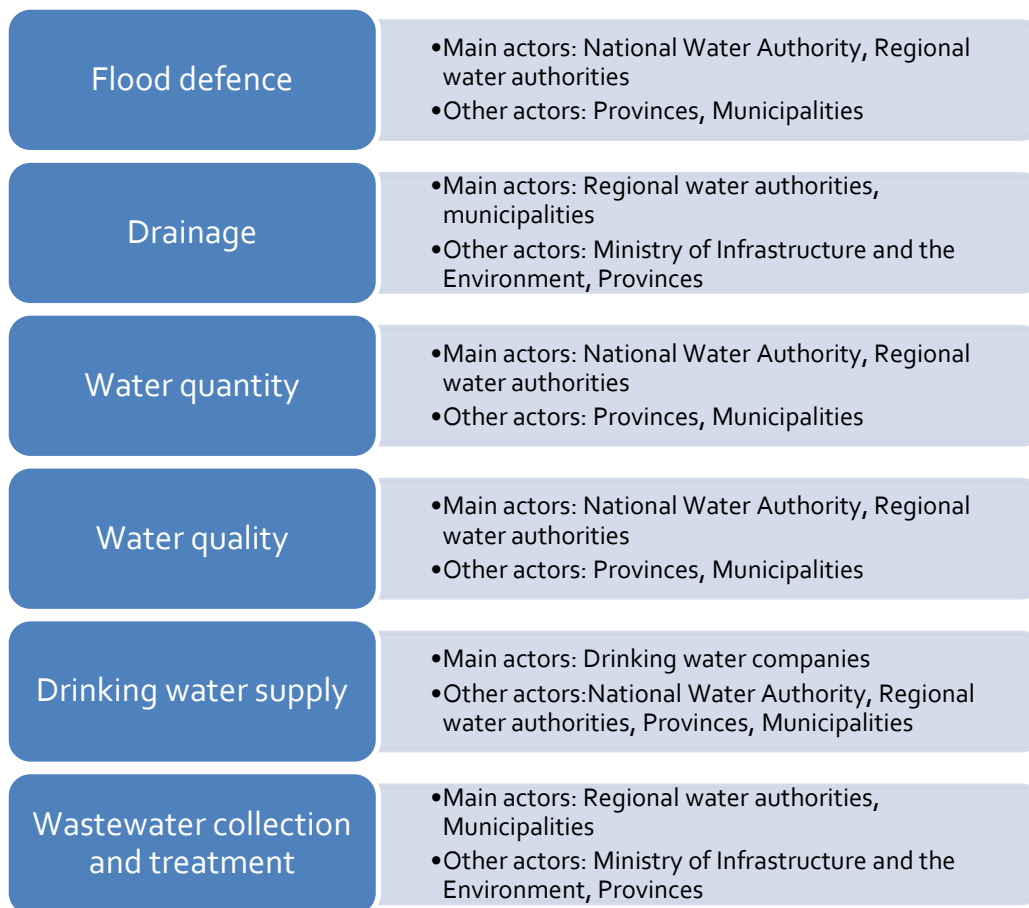


Figure 5 Main water functions and institutional actors involved (OECD, 2015)

This current network society asks for a different attitude of the regional water authorities: more focus on cooperation with other governmental organisations, societal organisations, with civilians and business (UVW, 2016).

### 2.2.1 Focus area Linge

Although there are several possibilities to examine the OECD governance principles in practice, for this research a case study is done at Waterschap Rivierenland on a project about the Linge river. The reason for using this project as a case study is because this project is in the middle of the phase between formulating a new strategy or policy and implementing it. This is the phase where the OECD Principles on Water Governance can improve water governance systems (see figure 6). Besides, in the Focus area Linge project Waterschap Rivierenland is looking for a framework they can hold on to when implementing a new form of water governance. Since this research examines how the Principles on Water Governance fit water governance on the local scale, this case about the Linge river suits this research in every respect.

The Focus area Linge project is part the Water Management Program 2016-2021 of Waterschap Rivierenland as a special focus area. Focus area Linge one of the four key projects when it is about interaction between a specific area and her actors and fostering integrated water governance and area focussed working. The other three are focus area Alblasserwaard, focus area Kop van de Betuwe and focus area Waaldijk between Gorinchem and Tiel. This case study about the Linge river can function as an example of how the principles are received in practice and how they work out at the local scale in the phase between formulating a strategy and implement it. In this project, Waterschap Rivierenland wants to achieve a more integrated and area focussed way of working.



The local water authority would like to act as an open organisation, where bottom-up input of civilians and organisations (like recreational and voluntary organisations) is important (Waterschap Rivierenland, 2015a).

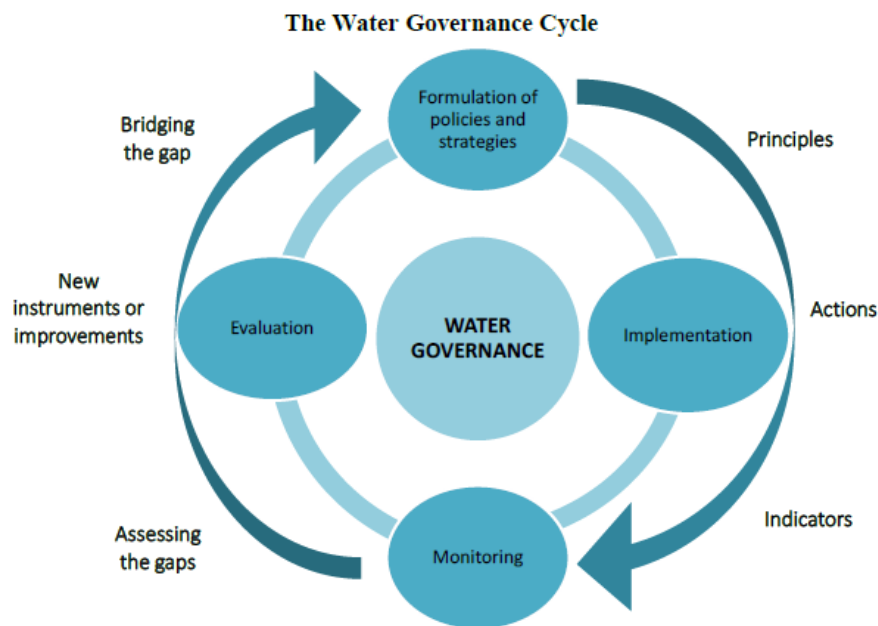


Figure 6 The Water Governance Cycle (OECD, 2015)

The Linge river is a 108 km long river located in the Netherlands between the Nederrijn/Lek and the Waal, mostly in the province of Gelderland (see figure 7). The Linge river is an important water vein and covers a large river basin (74.000 hectares). There are a number of important functions that can be assigned to the Linge river. It provides water for agriculture and urban areas, the Linge is partly suitable for shipping industry, (wet) nature plays an important role around this river, and the Linge river also provides flood storage areas. Besides, the water of the Linge can be used for drinking water and it is a very valuable area for recreational activities like swimming and pleasure cruising or canoeing. Alongside the low-lying riversides, there are some Lingelandjes (small private gardens on the riverbank) and camping sites located (Waterschap Rivierenland, 2008). With the focus area Linge project, Waterschap Rivierenland is considering the best possible alignment of features and usage for this river basin. To create the desired public value in the Linge area, the water authority has to integrate and govern needs and wishes of different groups involved in the Linge river basin. They have to examine the values of the Linge river and how the river is used together with municipalities, civilians and entrepreneurs. In the Linge area also a lot of voluntary organisations are active, like Stichting behoud Lingelandschap and Lingeweb.

With the Focus area Linge project, Waterschap Rivierenland is trying to implement a more open (horizontal) way of managing their water (Waterschap Rivierenland, 2015a). In the project Focus area Linge the water authority is looking for the best possible alignment of features and usage. Stakeholder involvement and the coherence between water, land use and spatial planning plays an important role in this case (see also Appendix D). Aims of the project are (Waterschap Rivierenland, 2015a):

- Focus on the function of the Linge as important water vein in the River Area (Rivierengebied)
- Enlarge the water conscience around the inhabitants
- Enlarge the visibility on the work of Waterschap Rivierenland
- Enlarge the network of actors who wants to take or take initiatives in the Linge area

- Assess initiatives for the Linge so that participants can carry out their own Waterschap Rivierenland projects.



Figure 7 Location of the Linge in the Netherlands (Own work)

## 2.2 Water governance on the local scale and the existing challenges

To find out how the twelve Principles on Water Governance fit water governance on the local scale, first water governance on the local scale and the existing water governance challenges on this level in the Netherlands will be described. The reason for this is that water governance challenges can hinder the fit of the principles to the local scale. This first sub-question can be examined by a combination of literature study and the case study. To discover the challenges on the local scale, first water governance in a broader context will be described and how water governance on the local scale in the Netherlands is placed in this context. For this contextual part of this chapter the existing body of literature will be consulted. After this, existing literature will be used to describe water governance on the local scale and analyse challenges concerning water governance. However, the existing body of literature does not provide information about water governance challenges on a local scale. Challenges described in literature are more general challenges for water governance. This is why also the case study about the Linge river is needed to answer this question. According to Biswas (2010), improving the water governance of any water use sector is hampered by the unavailability of good, objective, unbiased and independent analyses of good and replicable case studies. In this case study about Focus area Linge, interviews are used to explore people their thoughts and experiences about water governance challenges on a local scale.

To examine water governance challenges in practice on a local scale and to achieve an as good as possible image of this case about the Linge river, several actors in the water field in the Linge area are being approached for an interview. In the Focus area Linge project, Waterschap Rivierenland is not the only stakeholder involved, the water authority is trying to involve more stakeholders in the Linge area, especially municipalities. In the initial phase of the project, already municipalities get involved, because the Linge river flows through many municipal areas and therefore this project may have an influence on their civilians and users of the Linge river. For this reason municipalities along the Linge and three water managers with knowledge about the Linge are being interviewed for this research. Three municipalities along the 'Boven Linge' and three municipalities along the 'Beneden Linge'. These are the municipalities of: Gorinchem, Leerdam, Geldermalsen, Tiel, Overbetuwe and Lingewaard. Upstream in the 'Boven-Linge' area the Linge is canalized and flows through agricultural areas. The main function of the Linge in this area is to deliver water for agriculture. In the 'Beneden-Linge' area, the Linge is more a meandering river. Factors as recreation and nature are more important at this part of the Linge. The municipalities that have been interviewed are shown in figure 8. By interviewing the most important players in the water field for the Focus area Linge project, information can be obtained to formulate an answer to the first sub-question.

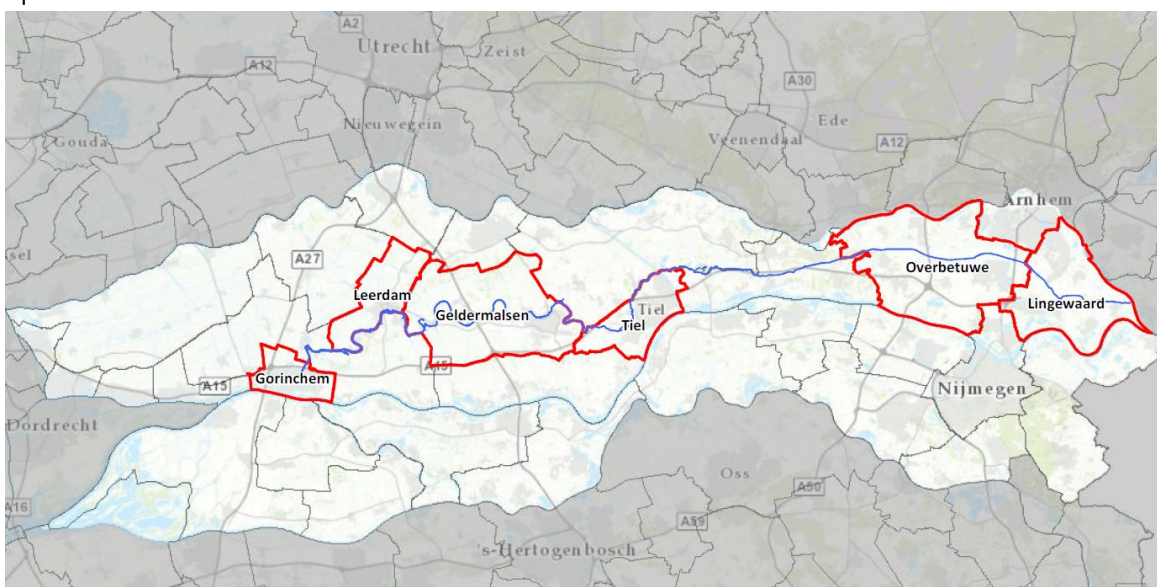


Figure 8 Municipalities interviewed (Own work)

The other important player besides the municipalities in the Linge area is Waterschap Rivierenland, who initiated the Focus area Linge project. Employees of Waterschap Rivierenland who have a lot of knowledge about the focus area Linge project are being approached for an interview. As water managers, they have a clear view on possible water governance challenges at local level in this case about the Linge. Eventually, four employees of Waterschap Rivierenland were being interviewed. Two Supervisors waterway management (Opzichters vaarwegbeheer). One of them has also worked at the former Water Authority of the Linge (Waterschap van de Linge) in the past, which is part of Waterschap Rivierenland since 2001. This interviewee has a lot of knowledge and information about the Linge itself and the Focus area Linge project. The other Supervisor waterway management is the current supervisor of the Linge and is the connection between the water authority and actors in the Linge area. Secondly, a Policy advisor at Waterschap Rivierenland. He has participated in establishing the Water Management Plan 2016-2021 and the Focus area Linge chapter. Finally, another interesting interviewee is a policy coordinator at Waterschap Rivierenland, who also participated in establishing the Water Management Plan 2016-2021.

This case study helps to discover and explain water governance challenges in practice at a local scale. These challenges especially come forward through practical experiences, not only from theory, because a lot of them are very specific or occur on a very low scale. Some general challenges are made clear in theory, like that it is not always clear what water governance exactly is (Chhotray & Stoker, 2009; Tortajada, 2010). With the literature study and case study combined, it is possible to analyse water governance on a local scale and if challenges described in scientific research are also significant water governance challenges in practice.

### **2.3 The influence of the Principles on Water Governance on the local scale**

The second sub-question describes how the Principles on Water Governance are received in practice and how each of the OECD governance principles influence effective, efficient and inclusive (trust and engagement) water governance on a local scale. Since the governmental organisations on the local scale are the actors who are the possible users of the OECD Principles on Water Governance in this case, these governmental organisations are being interviewed. In this case about the Focus area Linge project these are the municipalities and the water managers. A small literature study provides context about the purpose of the OECD governance principles and how they should influence water governance in general. However, with this literature study it is still not possible to discover if and how the OECD governance principles are received and work through at a local scale. With in-depth interviews it is possible to discover how water governance is interpreted on a local scale and which principles do work through at a local level and others do not and why (if principles work through at all). To examine how the OECD principles works through at a local scale, the six municipalities and three employees of Waterschap Rivierenland are being interviewed. The case study about the Linge can serve as an example about dealing with water governance on a local scale. Beside that this case study can function as an example, it can also contribute to the production of theoretical conclusions about how the OECD Principles on Water Governance influence integrated water governance on a local scale.

### **2.4 The (mis)fit of the OECD Principles on Water Governance**

The third sub-question is about how to cope with the fit or misfit of the OECD Principles on Water Governance to the local scale. The former two sub-questions clarify how the OECD principles fit water governance in practice. To establish some context, the answer to this sub-question starts with a small literature study about policy implementation. Since this question explores the best way to cope with the (mis)fit of the principles to water governance on the local scale, an expert is needed with in-depth knowledge about the OECD Principles on Water Governance and also knowledge about water governance on the local scale. For this question only answers of water managers and municipalities are not enough, because these interviewees don't have expert knowledge about the OECD Principles on Water Governance. When it turns out that there is a misfit between the OECD principles and water governance in practice, it is important to examine how to cope with this misfit

and how to make these principles fit better to water governance practice. To find out how to cope with a (mis)fit of the OECD Principles on Water Governance, the results of former two sub-questions will be showed to someone with expert knowledge about the OECD Principles on Water Governance and about water governance in the Netherlands. The answer on the first sub-question about water governance challenges provide an answer on how water governance at local scale works out. Combining knowledge about water governance challenges at a local scale and the information of how the Principles on Water Governance are received in practice (answer on the second sub-question) provide answers on why the OECD governance principles fit or don't fit water governance on the local scale. These reasons for the (mis)fit of the principles will be presented to the expert on water governance and the OECD Principles on Water Governance. After this, the expert can provide knowledge about how to cope with this (mis)fit.

For answering this sub-question, a meeting took place with a project leader at the Unie van Waterschappen. This project leader is active in the administrative policy, international cooperation and water governance theme and has a lot of knowledge on the OECD Principles on Water Governance. Beside this mirroring of the results of the former two sub-questions, also the six municipalities and the water managers are being asked why they think the principles do or don't fit the local scale and how to improve the fit (when needed).

## 2.5 Interviews

The interview style that will be used in this research will be semi-structured. A list with questions or topics that needs to be covered during the interviews is shown in Appendix A. This style of interviewing provides the interviewee room for formulating their own answers and view on the topics. Besides, semi structured interviews make it possible to discuss other topics that may be of importance for the research subject, that are not part of the list because the researcher did not take this into account. It offers the researcher flexibility. Semi-structured interviewing offers the researcher the opportunity to delve deeply into a topic and collect detailed information. In this research this is needed because it is all about the experiences and views certain people have on the topic.

To arrange the nine interviews (six municipalities and three with employees of Waterschap Rivierenland) the interview candidates were approached personally, by email or by phone contact. Prior to the interview, the OECD governance principles report and the list with interview questions were send to the interviewees, so that the interviewees were prepared for the interview. All interviews took place face to face and were recorded when the interviewee gave permission for this (which was the case with all nine interviews). Recording the interviews made it possible to focus on the interview itself and the interviewer would not miss statements of the interviewee when taking notes. The audio recordings of the interviews have been transcribed and after that, the data could be analysed by identifying common views of interviewees on certain topics or frequently named topics. This is done by hand by colouring common categories or themes. Within these categories common sub themes or topics will be given a side note (see Appendix C). When an interviewee would like to read the transcription of the interview, this will be send to him or her by email. At all interviews the Project leader of the Focus area Linge project was present. Also his statements are being used as data for this research.

# How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with this (mis)fit?

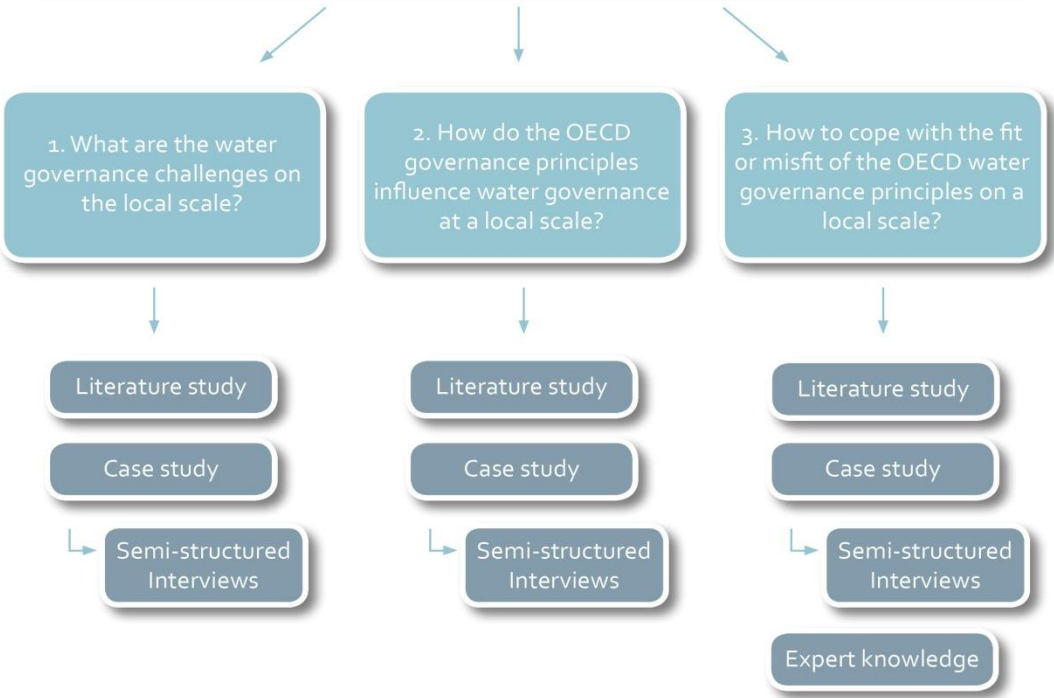


Figure 9 Schematic overview of the research methods used in this research

## Chapter 3: Water governance challenges on the local level

In this chapter water governance in the Netherlands and the resulting challenges on the local scale are being elaborated.

Over the years, the water policy field in the Netherlands has been differentiated in a set of formal rules of the game. For example in the Water Management Act, the Groundwater Act, the Embankment Act, and the Pollution of Surface Waters Act, set around specific water issues. In addition to these material laws, there are formalised rules and informal agreements about jurisdictions and competencies (Wiering & Immink, 2006). Water legislation is seen as a rather complex framework, which is difficult for outsiders to penetrate (Bressers et al., 1994). Up until the 1980s water management was strongly focused on meeting the needs arising from spatial planning, including the spatial separation of functions. Water management ensured 'dry feet' and good conditions for use of the land (Wiering & Immink, 2006). As a consequence of climate change and diminished natural resilience following flooding and water shortages, the Netherlands is gradually shifting its emphasis away from technical measures such as building barriers, raising dikes, and enlarging drainage capacities (Woltjer & Al, 2007).

At the beginning of the 21<sup>st</sup> century, formal steps were taken to redesign Dutch water legislation into a comprehensive Integrated Water Management Act (Wiering & Immink, 2006). In 2009, this act replaced the existing water acts and aimed to improve coordination across land use planning, environmental management and nature conservation. The (still existing) Water Act is based on integrated management of the entire water system: the coherent set of one or more surface water bodies and groundwater bodies and associated storage areas, dams and supporting artwork (Rijkswaterstaat, n.d.). This Water Act is more a form of process management instead of hierarchical steering like before, where one government body sets directions and ensures implementation through legal means. So, in recent years it has become increasingly evident that the water problems of a country can no longer be resolved exclusively by the water professionals, and/or the water ministries, alone (Biswas, 2008). At this moment, water governance in the Netherlands is in a transition phase. The water sector is now being exposed to fundamental changes in contrast to a few years ago when the water sector was a closed and technocratic sector. Now, the overall thought is that water governance has to adapt to the demands of the water system itself. Water management and spatial planning are more and more interacting and water policy is increasingly interfering in societal matters (van Buuren et al., 2010).

Due to these fundamental changes, an agenda for water policy reform in the Netherlands requires a renewed focus on governance, with an emphasis on active stakeholder involvement, as well as more transparent information and performance monitoring. It also requires improved coherence between water, land use and spatial planning and a greater focus on long-term financial sustainability (OECD, 2014). Besides, it is necessary to create an enabling environment which facilitates efficient private and public sector initiatives. This requires a coherent legal framework with a strong and autonomous regulatory regime (Bruns & Bandaragoda, 2003).

### 3.1 Water governance

The term water governance is thus relatively new, as is pointed out in the introduction of this research. The Global Water Partnership defines water governance as follows:

*"Water governance refers to the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and the delivery of water services, at different levels of society"* (Rogers & Hall, 2003, p. 7).

The United Nations Development Programme [UNDP] considers water governance to include *"political, economic and social processes and institutions through which governments, private sector and civil society make decisions about how best to use, allocate, develop and manage water resources"* (Tortajada, 2010, p. 299).

In this research the definition of the OECD (2017) is used because this research examines the OECD Principles on Water Governance which are developed by the OECD, after their perception of water governance. Besides, all definitions are based on the same fundamental ideas and more or less contain the same features. All definitions describe water governance as a system, process or a mechanism to manage and develop water resources. As with general definitions of governance, the presence of multiple actors is important and that these actors may exist at different levels or scales. The OECD defines water governance as follows:

*"Water governance is the set of rules, practices, and processes through which decisions for the management of water resources and services are taken and implemented, and decision-makers are held accountable"* (OECD, 2017, p. 1).

### 3.1.1 Water governance under the concept of governance

Water governance derives from the ideas and the broader concept of governance. Governance can be described as follows:

*"The apparently broad consensus that has developed around the idea that government is actually not the cockpit from which society is governed and that policy making processes rather are generally an interplay among various actors has led to a full-scale search for new governing methods and a discussion on governance and public management"* (Klijn & Koppenjan, 2000, p. 1).

However, what does governance mean? According to Klijn & Koppenjan (2000) governance means the 'directed influence of societal processes'. A few years later Bovaird and Löffler (2009, p. 8) described governance as *"how an organisation works with its partners, stakeholders and networks to influence the outcomes of public policies"*. Chhotray & Stoker (2009) describe governance as follows: *"Governance seeks to understand the way we construct collective decision-making"*. Governance has been used mostly as an umbrella concept and no agreed definition exists (Tortajada, 2010). Governance is a complex process that considers multi-level participation beyond the state, where decision making includes not only public institutions, but also the private sector, civil society and society in general (Tortajada, 2010). Governance is a more inclusive concept than government per se; it embraces the relationship between a society and its government (Rogers & Hall, 2003).

Today, governance has become a highly topical issue for international organizations – the United Nations, OECD and the Council of Europe all produce policy-relevant advice and research related to various governance issues (Bovaird & Löffler, 2009, p.216). However, a regular complaint across all literatures is that governance is often vaguely defined, and the scope of its application is not specified (Chhotray & Stoker, 2009; Tortajada, 2010). Or, as is stated by Pahl-Wostl et al. (2010, p. 572): *"Governance embraces the full complexity of a wide range of processes and their interaction"*. One of the things all governance definitions have in common is that governance asks how collective decisions that have to be made by the government can be undertaken with effectiveness and legitimacy (Chhotray & Stoker, 2009).

On a practical basis, water governance requires an institutional design with multiple elements at the different levels of government (Grigg, 2011). However, what is the case with governance, is also the case with water governance, there are various definitions, the concept can be broad and fuzzy (Lautze et al., 2011). While there are various approaches of water governance, they all contain similar governance features (Tropp, 2007, p. 22):



- Governance is seen as a process of interactions rather than as a formal institution/regime.
- Governance is based on accommodation rather than domination—decision-making is increasingly based on negotiations, dialogue and networking.
- Governance provides alternatives to top-down hierarchy, such as through horizontal networks.
- Governance includes both private and public sectors and the interactions and relationships between them are critical for governance outcomes.
- Governance is action-orientated (governance for the common good or for solving common problems) and appears at all scales, from local to global.
- Authority is still considered important but it does not necessarily take the form of government authority.
- There is an emphasis on relationships, networks and organisation of collective action.

The emergence of water governance has led to a transformation from state-centred to more inclusive and pluralistic ways of making decisions within the water sector (Tropp, 2007). Also the Unie van Waterschappen is very positive about water governance and more integrated water governance. As is explained in the Introduction of this research, the Unie van Waterschappen points out that, this modern society asks for a serving regional water authority. The regional water authorities must invest in an open and a horizontal network culture. Solving problems does not work any longer by only focussing only on the core tasks of the water authorities. It is important to work with an integrated approach which takes into account all different interests (UVW, 2015). According to Tropp (2007) the concept of governance is useful because it can explain developments of decentralisation, privatisation, ideas of integrated approaches, etc. in the water sector. The concept of governance should not be seen as an end in itself. It is a means to formulate and implement water policies that are seen as fair by those people to whom they are intended and by society in general (Akhmouch & Correia, 2016).

### 3.1.2 Water governance and IWRM

In the water field there is a shift going on from using the term IWRM towards water governance, to make water management more comprehensive and make it less difficult to penetrate this complex framework of legislation and stakeholders. Integration in management of water resources engages water governance. Both cross levels and sectors, and together they combine technical and political decisions (Smith & Clausen, 2017). The traditional strategy to manage land and water under different governance regimes no longer suits the rapidly changing environmental constraints and social construction of two key elements in urban planning (Hartmann & Spit, 2014). There is a need for connecting and integrating sectors and subsectors in the field of water management (Herk et al., 2011; Wiering & Immink, 2006; van der Zaag, 2005; Hartmann & Spit, 2014). In the current literature, the era of 'integrated water resources management' is now being discarded by national water institutions and international organizations because it has not been possible to implement anywhere in the world for macro- or meso-scale water policies (Biswas & Tortajada, 2010). Due to this realization, water governance is becoming increasingly important instead of (integrated) water management. Also in the Netherlands there is a development ongoing towards more adaptive and integrated flood management strategies. This adds to the shift from technocratic state-oriented implementation methods towards a more collaborative governance logic (van Buuren et al., 2012).

While there is this rapidly ongoing change to using the term water governance, the concepts which were prominent before are also still being used. While water governance is distinct from water management and IWRM the three concepts are frequently intermingled (Lautze et al., 2011). This paragraph will explain the relation between these concepts, in order to clarify what water governance means. The global water partnership (2012, About IWRM) defines IWRM as follows:

*"Integrated Water Resources Management is a process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment".*

Many authors have considered different issues that need to be integrated under the concept of integrated water resource management (Biswas, 2004). In 2004 Biswas already pointed out that the definition of IWRM continued to be amorphous, and that there was no agreement on fundamental issues like what aspects should be integrated, how, by whom, or even if such integration in a wider sense is possible. Nobody knows exactly what integrated water resource management means (Hartmann & Spit, 2014; Mostert, 2006). Biswas (2004, p. 251) stated:

*"Everyone is for integrated water resources management: no matter what it means, no matter whether it can be implemented, or no matter whether it would actually improve water management processes".*

Lautze et al. (2011, p. 5) explained that water governance is actually a part of the IWRM paradigm and that water management contains implementing the practical measures to achieve the goals developed in the water governance framework.

*"While the inclusive nature of IWRM likely means that water governance, is subsumed within it, setting pre-determined goals or outcomes associated with IWRM, circumscribes a major role of water governance — that of determining goals".*

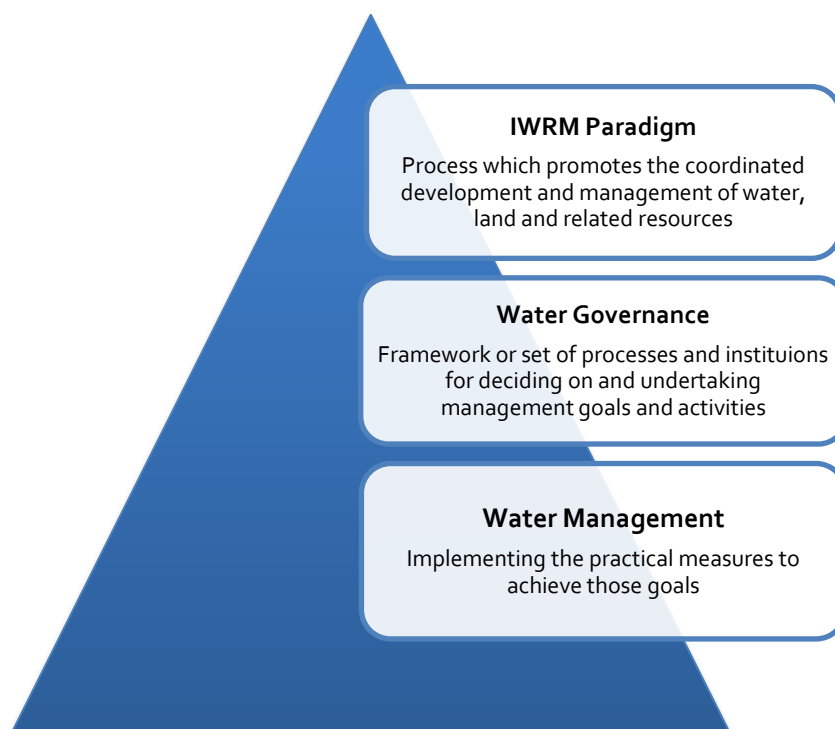


Figure 10 Schematic overview of the relation between IWRM, Water Governance and Water Management (Own work)

While water governance is at the core of planning activities, governance is relevant even after the shift from planning to implementation. For example, undertaking a practical task such as monitoring groundwater withdrawal can still be affected by elements of water governance, such as transparency (Lautze et al., 2011). Effective governance of water resources and water service delivery will require the combined commitment of government and various groups in civil society, particularly at local/community levels, as well as the private sector (Rogers & Hall, 2003).

*"If you take a narrow view on governance without looking at effective implementation and politics (both high level and local), then you could actually do more harm than good, because you lose time and destroy institutions rather than building them up effectively"* (UNDP, .2013, p. 3).

### 3.2 Water governance challenges elaborated in literature

However, water governance has to change more during the next 20 years than it has in past 2000 years if societal needs for water-related activities, including environmental requirements, are to be met successfully in a timely, equitable and cost-effective manner (Biswas & Tortajada, 2010). This is not only the case at national level, also at lower scale changing water governance is an increasingly important topic. The Unie van Waterschappen (2015) points out that a modern, energetic society asks for a serving Local Water Authority, which invests in an open and a horizontal network culture. Solving problems does not work any longer by only focussing on core tasks of the Water Authorities. It is important to work with an integrated approach which takes into account all different interests. This causes challenges and according to the UN, water governance issues can be very complex (UNDP, 2013).

*"If it is accepted that one of the largest challenges in resolving water crises has to do with governance, it is clear that many decision-makers and managers within the water sector currently are not prepared to deal with new forms of governance issues, such as conflict mediation, mobilisation of communities, partnership formation, managing processes of stakeholder dialogue and participation"*  
(Tropp, 2007, p. 27).

Theories and methods for water governance are still in the development phase (Halbe et al., 2013) and there still exist challenges that make it harder to use the concept of water governance. Some challenges concerning water governance are coming forward from literature. For example, Tropp stated in 2007 that the water sector was still largely technology- and water-supply-driven. There is an inability to coordinate the management of water resources with other resource sectors and development- and environment related issues (Tortajada, 2010a). This conventional technocratic knowledge will continue to be important to water agencies and decision makers, but their ability to implement new forms of governance will require a different kind of knowledge (Tropp, 2007).

Land and water are still often managed separately because of organizational and cultural differences between water utilities designed to provide drinking water and wastewater services to municipal customers and planning agencies intended for land use regulation (Gober et al., 2011). There is a lack of realization that water is a cross-sectoral issue, and that its governance increasingly depends on policies in other sectors. There is need for a broader approach that cannot only be provided by engineers alone because of the increasing complexities of problems associated with efficient water governance and growing societal interests in water-related issues (Tortajada, 2010a.).

Another challenge is that there is a lack of adequate coordination and communication among agencies, and a lack of mechanisms for effective participation of different stakeholders at different levels of decision making (Tortajada, 2010a). People in general are not aware of water issues that the world is facing. Nevertheless, engagement of local communities and exchange of views and information is fundamental to obtaining public support. The challenge for governments is to decide how and when specific responsibilities can be delegated to several stakeholders. Beside that, it is

important to ensure at the same time the efficiency of the water governance system (Tortajada, 2010a). These are all water governance challenges on a broad scale. According to the OECD (2014, p. 17) the water sector in the Netherlands is operating excellent.

*"The Netherlands has an excellent track record on water management in several areas [...]. A sophisticated "natural infrastructure" has been built and operated through a specific system of water governance, which combines functional democracies with central, provincial and local authorities".*

Still, the OECD did find a couple of water governance challenges for the Netherlands. For example there is a striking awareness gap among Dutch citizens related to key water management functions, how they are performed and by whom. Besides, there are concerns about water quality and the resilience of freshwater ecosystems. Also economic incentives to efficiently manage too much, too little and too polluted water could be strengthened. The OECD recommend some changes that can help to shape an agenda for future Dutch water governance. They advise the Netherlands for example to strengthen independent accountability mechanisms for more transparent information and performance monitoring, strengthen the coherence between water, land use and spatial planning and give room for non-technical innovation (OECD, 2014). The last change advised by the OECD about creating more room for non-technical innovation was already pointed out by Tropp in 2007. However, that the water sector is only based on technology is apparently still a water governance challenge in the Netherlands. Also the point that coherence between water, land use and spatial planning must be strengthened has already been addressed by Gober in 2011.

### 3.3 Water governance challenges in practice

However, are these global challenges, stated in literature and identified by the OECD, also water governance challenges on the local scale, or is water governance on a local level concerned with other challenges? To identify water governance challenges on the local scale, the case study about the Focus area Linge project is used. To discover if the challenges elaborated above are also present at local scale in the Linge case, six municipalities and four employees of Waterschap Rivierenland have been interviewed. The interviewees were asked about what kind of water governance challenges they experience around the Linge river.

#### 3.3.1 The technology driven water sector

The challenge that the water sector is still technology driven pointed out by Tropp in 2007, is also a challenge in this case about the Linge river.

*"Our way of looking at water can be problem. We are not used to view water in a broader way"* (Policy Coordinator at Waterschap Rivierenland, 2017).

*"The Linge is still very much on the operational side of water management at Waterschap Rivierenland, we don't do something else with this river"* (Project leader Focus area Linge project at Waterschap Rivierenland, 2017).

The Focus area Linge project is a step in the direction of lesser focus on technology and making room for more non-technical actions and innovations and a more environmental focussed view. Respondents also pointed out that coordination with other governmental bodies is becoming more important and therefore the technical focus is becoming less important. There is a will to become a more, non-technical focussed organisation.

*"We have to break through the very rigid attitude of the local water authorities"* (Supervisor waterway management 1 Waterschap Rivierenland, 2017).

*"Area focussed working is a way to get more integration and to see and recognize subjects and projects that play an important role in an area"* (Policy advisor, Waterschap Rivierenland, 2017).

### 3.3.2 Water as a cross-sectoral issue

Gober (2011) stated that land and water are still managed separately and Tortajada (2010a) pointed out that there is a lack of realization that water is a cross-sectoral issue. However, in this case about the Linge, it is clear that Waterschap Rivierenland is aware of the fact water is a cross-sectoral issue and they are trying to manage land and water together which can be seen in Focus area Linge. However, this is not always easy, because water is managed by the local water authority (in this case Waterschap Rivierenland) and land alongside the Linge is generally managed by municipalities. To reach this cross-sectoral way of working it is important to not only focus on sectoral decisions.

*"You don't have to play chess on two separate chessboards, we have to play together"* (Policy advisor Waterschap Rivierenland, 2017).

*"Officials must be in the position within which they have more power to make decisions. Besides, directors must offer that space to their employees and not only focus on sectoral decisions, for example only with a focus on flooding"* (Policy advisor Waterschap Rivierenland, 2017).

A common view amongst interviewed municipalities was that Waterschap Rivierenland is trying to manage land and water together by introducing account managers for each municipality. This seemed to improve the contact between the water authority and the different municipalities.

*"In the cooperation with Waterschap Rivierenland the water authority is very accessible towards us as municipality. Once a month the account manager stops by to coordinate our activities with theirs in the best possible way"* (Policy employee 1 municipality of Overbetuwe, 2017)

*"As municipality we often meet the account manager of Waterschap Rivierenland to keep on coordinating with what we both are occupied with and where improvement is possible"* (Policy employee municipality Water of Geldermalsen, 2017).

*"The account managers always know exactly what is going on in our municipality and at Waterschap Rivierenland, almost better than what I know by myself about my municipality"* (Policy employee Water municipality of Leerdam, 2017).

In contrast to the positive thoughts of the municipalities, employees of Waterschap Rivierenland itself are more critical about their cross-sectoral way of working.

*"The way in which we are involved with our water task is in itself not integrated. We do touch other subjects like recreation, economy, environment and nature but we don't see it as a whole"* (Policy coordinator Waterschap Rivierenland, 2017).

*"There is need for a cultural change in our organisation. We need to think about how we relate ourselves to other stakeholders, governmental organisations and sectors"* (Policy advisor Waterschap Rivierenland, 2017).

### 3.3.3 Lack of adequate coordination and participation mechanisms

Another water governance challenge that was mentioned in paragraph 3.3 is that there is a lack of adequate coordination and communication among agencies. In this case about the Linge, the water authority uses the account manager concept which evidently improved coordination and communication between Waterschap Rivierenland and municipalities (see quotes on the previous page). Also a lack of mechanisms for effective participation of different stakeholders at different levels of decision making was pointed out in literature as an issue in water governance (Tortajada, 2010a). In this case study about the Linge it is clear that there is a lack of a mechanism for effective participation of different stakeholders. In the Focus area Linge project, Waterschap Rivierenland

would like to involve stakeholders to reach a more area focussed way of working. However, how the water authority has to involve these stakeholders is unclear for the organisation.

*"I am looking for possibilities to implement a more integrated form of water governance in the Linge area. I want to reach a certain public, not just municipalities. I want to create a broader view, reach more different people. However. I am still examining the best manner for involving other stakeholders"* (Project leader Focus area Linge project, 2017).

### 3.3.4 Awareness gap

The last challenge, elaborated by the OECD, is that there is a striking awareness gap among Dutch citizens related to key water management functions, how they are performed and by whom (OECD, 2014). This was indeed also a common view among the interviewees. One municipality argued the fact if this awareness gap is really a striking problem.

*"The water authorities in general are a very unknown organization for inhabitants"* (Policy coordinator Waterschap Rivierenland, 2017).

*"Some inhabitants don't understand the difference between a river and a canal"* (Archaeologist municipality of Tiel, 2017).

*"This low rage of water consciousness is a luxury problem, because in general water management in the Netherlands is excellent"* (Policy employee 2 municipality of Overbetuwe, 2017).

While some of the interviewees question the importance of this awareness gap, this is a real problem for water managers. The relationship between citizens and water institutions has evolved towards a more technical and managerial dimension to the detriment of social and political aspects. This has generated more distance between water managers and the general public. This distance raises challenges like 'How to increase the awareness of risks?' or 'How to influence decisions of property owners, businesses and municipalities about vulnerability risk?'. For the future it is important to overcome this awareness gap, to influence the willingness to pay for flood safety for example and make the society resilient to future shocks. Interconnections between authorities and the public are an important element reach this (OECD, 2014). Besides, effective public governance is also important to ensure accountability of institutions in delivering water policy outcomes (OECD, 2014).

### 3.3.5 Other challenges

Beside water governance challenges described in literature, the interviews also pointed to some other challenges or barriers that are being experienced at local scale. A common heard challenge among the interviewees is financing. Interviewees associate implementing a new form of water governance with high financial costs which can affect implementation of the area focussed strategy in a negative way.

*"I think financial costs will be a challenge. When you want to set up a project, that always ends up costing a lot of money"* (Policy employee 1 municipality of Overbetuwe, 2017).

*"All kind of projects are involved with financing, that will always be a challenge"* (Policy employee municipality of Geldermalsen, 2017).

*"An important intern barrier for this project will be the possibility that no money at all will be set aside for this project or too little money because we only focus on problem areas"* (Policy coordinator Waterschap Rivierenland, 2017)

Another water governance challenge specifically for the local scale is that for small municipalities water is not a priority task. The only water responsibility of municipalities is groundwater in urban areas, wastewater drainage and rainwater drainage through the sewerage (Rijksoverheid, n.d.-a). Municipalities are possessed with many different tasks. Water is only a small task and with that, not a priority task for municipalities. This causes a mismatch between the will of the local water authority to increase their focus on cooperation with other governmental organisations on the water subject, and the capability of municipalities to answer this will.

*"There is too little attention for water at our municipality. The water task has been fallen between two stools (tussen wal en schip terecht gekomen)" (Policy employee 2 municipality of Overbetuwe, 2017).*

*"As small municipality we have less intention to actively participate in such a project, we work on a very small scale and we are very busy with our own tasks" (Policy employee municipality of Leerdam, 2017).*

### 3.4 Conclusion:

Water governance in the Netherlands and thus water governance on the local scale is changing. These paradigm shift to a more open and integrated attitude of water managers causes new challenges beside the already existing challenges described in literature. Comparing the results, it can be seen that water governance challenges described in the literature and by the OECD do also play a role in water governance at a local level. The critics that the water sector is still technology driven is also present in this case, however this is something that is changing in the right direction. The start of the project Focus area Linge proves that Waterschap Rivierenland is aware of the fact that it is important to create a water sector that is not only technology driven. Besides, in this case the idea that water is a cross-sectoral issue is present. With the Focus area Linge project, Waterschap Rivierenland is exploring the idea to manage land and water together instead of handling both as two separate things. The will to implement this way of working is present at the employees of the water authority. However, they argue that things need to be changed to let this new form of water governance work. There is a need for an organisational change.

The lack of adequate coordination and communication is also something that is changing in the right direction. Waterschap Rivierenland introduced the account manager concept a few years back to improve the communication with municipalities. Municipalities are still very positive about the presence of an account manager and they all praise Waterschap Rivierenland for their good communication. However, the critic that there is a lack of mechanisms for participation is justified, this is something that needs to be changed because stakeholder engagement and participation is getting more and more important. The OECD named the striking awareness gap as a water governance challenge for the Netherlands. The interviewees all endorsed this challenge, however it is the question if this is a real problem. Water management in the Netherlands reaches a very high level. Interviewees see this awareness gap maybe more as a luxury problem than a real water governance challenge. However the OECD points out that it is important to overcome this awareness gap to ensure accountability of institutions in delivering water policy outcomes.

Beside the water governance challenges described in literature, in this case also some water governance challenges especially for the local scale appeared. One of the most striking challenges is the fact that for small municipalities water is not a priority task, while for the water authority water is the most important task. This causes a mismatch sometimes in coordination between those two governmental organisations. Small municipalities have many tasks; water is one of them and often don't get the attention that it deserves. Furthermore, this makes it hard for municipalities to answer the wish of Waterschap Rivierenland for more collaboration in the Linge project. Municipalities see water as a priority task of the regional water authority, and because of that, their willingness to put more effort in issues as water beyond their priority tasks is small. Besides, all interviewees see financial costs as a large barrier for implementing a new form of water governance. In the Focus area

Linge project there is not in any way a striking water problem, it is only about experimenting with a new form of governance. Because of this interviewees are afraid that it is hard to collect enough financial resources to go on with the Focus area Linge project.

On the one hand, the principles can help to improve water governance and overcome challenges that hinder the implementation of new policies or strategies. For example the principles can offer a guideline to improve coordination and communication and offer some grip for developing stakeholder involvement and participation in the right way. However, the new discovered challenges (water is not a priority task for municipalities and financial issues) can make it harder to apply the Principles on Water Governance on the local scale, which makes it harder to improve water governance on the local scale. The next chapter examines how the Principles on Water Governance are being received in practice and if and how each of the Principles on Water Governance can be applied to the local scale in the case about the Linge river.



## Chapter 4: Mirroring the OECD Principles on Water Governance

This chapter is about how the OECD Principles on Water Governance are being received in practice at the local scale and how each of the principles can be applied so that they foster effective, efficient and inclusive water governance on the local scale. To examine this, the case about the Linge river at Waterschap Rivierenland is used. In the paragraphs below, the principles are elaborated and how each of these principles work out in this case about the Linge. After this, some general conclusions about if and how the principles work out on such a small scale will follow, because the OECD stated that the principles can be applied to every governmental level (OECD, 2015).

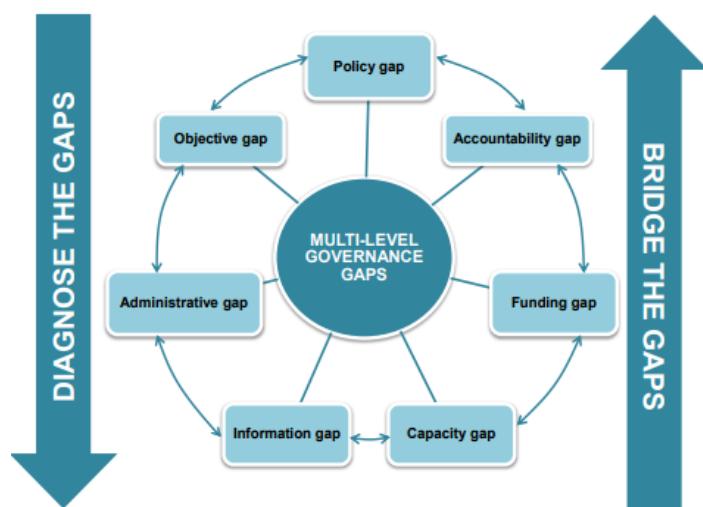


Figure 11 Gaps of water governance (OECD, 2015)

In 2013, the OECD Water Governance Initiative (WGI) was created as an international network of public, private and non-for-profit stakeholders to share experience on water reforms, peer-review analytical work on water governance, and produce bottom-up knowledge and guidance such as the OECD Principles on Water Governance (OECD n.d.). The need to bridge the gaps of water governance identified by the OECD (2015), and to achieve the goals for water governance established by the 6th World Water Forum, has led to the formulation of the twelve principles (Akhmouch & Correia, 2016). The OECD Principles on Water Governance set standards for more effective, efficient

and inclusive design and implementation of water policies, and encourage governments to put them into action. The OECD developed the Twelve Principles on Water Governance which are expected to contribute to improving the “Water Governance Cycle” from policy design to implementation, which is shown in figure 6 in chapter 2. The OECD Principles on Water Governance provide the twelve must-do for governments to design and implement effective, efficient, and inclusive water policies in a shared responsibility with the broader range of stakeholders (OECD, n.d.-a).

### 4.1 OECD Principles on Water Governance

The OECD Principles on Water Governance intend to contribute to tangible and outcome-oriented public policies, based on three mutually reinforcing and complementary dimensions of water governance: effectiveness, efficiency and trust and engagement (OECD, 2015). The OECD (2015) describes these three dimensions as follows:

- **Effectiveness** relates to the contribution of governance to define clear sustainable water policy goals and targets at all levels of government, to implement those policy goals, and to meet expected targets.
- **Efficiency** relates to the contribution of governance to maximise the benefits of sustainable water management and welfare at the least cost to society.
- **Trust and Engagement** relate to the contribution of governance to building public confidence and ensuring inclusiveness of stakeholders through democratic legitimacy and fairness for society at large”.

In figure 12 the twelve Principles on Water Governance are elaborated. A schematic overview of the principles is shown in the introduction of this research (figure 1).

### Enhancing the effectiveness of water governance

- **Principle 1:** Clearly allocate and distinguish *roles and responsibilities* for water policymaking, policy implementation, operational management and regulation, and foster co-ordination across these responsible authorities.
- **Principle 2:** Manage water at *the appropriate scale(s)* within integrated basin governance systems to reflect local conditions, and foster co-ordination between the different scales.
- **Principle 3:** Encourage policy coherence through effective *cross-sectoral co-ordination*, especially between policies for water and the environment, health, energy, agriculture, industry, spatial planning and land use.
- **Principle 4:** Adapt the level of *capacity* of responsible authorities to the complexity of water challenges to be met, and to the set of competencies required to carry out their duties.

### Enhancing the efficiency of water governance

- **Principle 5:** Produce, update, and share timely, consistent, comparable and policy-relevant water and water-related *data and information*, and use it to guide, assess and improve water policy.
- **Principle 6:** Ensure that governance arrangements help mobilise water finance and allocate *financial resources* in an efficient, transparent and timely manner.
- **Principle 7:** Ensure that sound water management *regulatory frameworks* are effectively implemented and enforced in pursuit of the public interest.
- **Principle 8:** Promote the adoption and implementation of *innovative water governance practices* across responsible authorities, levels of government and relevant stakeholders.

### Enhancing trust and engagement in water governance

- **Principle 9:** Mainstream *integrity and transparency* practices across water policies, water institutions and water governance frameworks for greater accountability and trust in decision-making.
- **Principle 10:** *Promote stakeholder engagement* for informed and outcome-oriented contributions to water policy design and implementation.
- **Principle 11:** Encourage water governance frameworks that help manage trade-offs across water users, rural and urban areas, and generations.
- **Principle 12:** Promote regular *monitoring and evaluation* of water policy and governance where appropriate, share the results with the public and make adjustments when needed.

Figure 12 OECD Principles on Water Governance (OECD, 2015)

The OECD Principles on Water Governance are developed on the premise that there is no one-size-fits-all solution to water challenges worldwide, but a menu of options building on the diversity of legal, administrative and organisational systems within and across countries (OECD, 2015). These Principles on Water Governance set standards for governments to reap the economic, social and environmental benefits of good water governance through effective, efficient and inclusive design and implementation of water policies. The principles provide a framework to understand whether water governance systems are performing optimally and help to adjust them where necessary. They can help avoid traps and pitfalls, learning from international experience (Akhmouch & Correia, 2016). They can also catalyse efforts for making good practices more visible, and setting reform processes into motion at all levels of government to facilitate change where and when needed (OECD, 2015). The principles consider that water governance systems should be designed according to the challenges they are required to address (Akhmouch & Correia, 2016).

## 4.2 Receiving the principles in practice

To examine if and how the principles can be applied to the local scale, it is important to know how the principles are received at this level and if there is a willingness to use them at all. When asked about being aware of the existence of the OECD Principles on Water Governance, most of the interviewees were not aware of the existence of the principles. Employees of Waterschap Rivierenland were more familiar with the OECD and such a concept than the municipalities, however also the water managers did not know about the existence of the OECD Principles on Water Governance. One of the policy advisors for example was already familiar with the OECD concept of 'good governance' and another policy advisor was already familiar with the OECD report 'Fit for the future'. Despite the fact that all of the Waterschap Rivierenland interviewees did not read the OECD report on the governance principles, they showed willingness to learn more about the principles or had an open minded attitude towards the possibility of using the principles. One of the policy advisors of Waterschap Rivierenland indicated that he would like to know more about this report and asked if it was possible to send it to him. All municipalities responded negatively when asked about the awareness of the existence of the principles. Only one policy employee of the municipality of Overbetuwe knew the OECD, he was familiar with the OECD 'Fit for the future' report (2014) about water governance in the Netherlands. One interviewee who was not aware of the OECD or the existence of the principles questioned if these principles are totally new.

*"These OECD principles are not new, it is at most new that these principles are put together in one diagram" (Project leader Water municipality of Tiel, 2017).*

Besides, the common view under the interviewees was that a lot of the principles are already factors which are taken into account in a water governance system or a policy implementing process, despite the fact that (governmental) organisations are not aware of the existence of the OECD Principles on Water Governance.

*"I think municipalities and the regional water authorities are already handling this, yet unconscious. These principles maybe can help in providing some consciousness" (Policy employee municipality of Geldermalsen, 2017).*

*"I think a lot of those principles are already happening unconscious" (Policy employee municipality of Gorinchem, 2017).*

*"A lot of those twelve principles are executed in an unconscious way by everybody in their own way. We actually should structure these ways of executing the principles, so that everybody has the same purpose and holds on to the same framework" (Project leader Focus area Linge Waterschap Rivierenland, 2017).*

When the interviewees were asked about the usefulness of the principles, a division can be seen between the answers of the water managers and the answers of the municipalities. The water managers have a quite positive attitude about the Principles on Water Governance, despite that they tend to have barely any knowledge of them. They have at least some understanding for the principles.

*"These principles can help to broaden the scope of water governance and improve the public support. This will improve communication with the public and it will make the tasks of the water authority easier because the principles will help to create more public support" (Supervisor waterway management 1 Waterschap Rivierenland, 2017).*

*"I think these principles can be useful because everybody at Waterschap Rivierenland think in a too operational way. These principles can help us to create a broader view. I find this kind of schemes very useful to see where we stand. I really would like to read more about this framework"* (Policy advisor Waterschap Rivierenland, 2017).

*"I think every principle in this framework makes sense. These kind of principles give the water board guide lines to hold on to when governing their water"* (Policy coordinator Waterschap Rivierenland, 2017).

In contrast to the positive thoughts of the water managers about the OECD governance principles, the municipalities were critical about the usefulness of the principles. They tend to have barely any knowledge of them and besides, they seem to have less understanding for the principles or willingness to understand them comparing to the water managers.

*"I can't say anything against the principles, it seems logic to me. However I would not act upon these principles, I would read it if I have to, shrug my shoulders, and continue with what I was doing"* (Policy employee municipality of Leerdam).

*"I have the idea that people will glance through this report, and after that it will disappear in a filing cabinet and no one will look at it again"* (Project leader municipality of Gorinchem, 2017).

A common heard critic under the municipalities was that the principles are too abstract for the local scale and the practical activities at this level. This was the main explanation why these municipalities cannot work with the OECD Principles on Water Governance.

*"I think they are too abstract for this scale. Some of these principles even can't be applied to this level"* (Policy employee municipality of Leerdam, 2017).

*I miss palpability of these principles. It has to be translated to a more practical level. I don't know how I could possibly use this framework* (Project leader municipality of Lingewaard, 2017).

#### 4.3 Enhancing the effectiveness of water governance

The four principles regarding this theme are elaborated above in figure 12. The key concepts of these principles are clear roles and responsibilities, manage water at appropriate scales, policy coherence and capacity. For this research a case about the Linge river in the Netherlands is used.

**Principle 1** is focussed on the fact that water governance can only be effective if the roles and responsibilities are clearly allocated and coordination across responsible authorities is fostered (OECD, 2015). The question is whether this is the case with water governance at a local scale. When the participants were asked about these allocation of roles and responsibilities in this case about the Linge river, the majority commented that the roles and responsibilities are clearly allocated. Most of the interviewees stated that Waterschap Rivierenland is in charge when it comes to water management. Beside the fact that municipalities are in general satisfied with this situation, also the water managers are content with the allocation of the roles and responsibilities.

*"As municipality we have very little responsibilities in the water field, the water authority is in charge there. I am policy advisor Water, however I don't have the means to act"* (Policy employee municipality of Geldermalsen, 2017).

*"I think that it is very clear who is responsible for which task. It is kind of a known fact that water belongs to the water authority. It is well arranged in the Netherlands. This system keeps the balance, because there are several governmental bodies"* (Policy employee municipality of Leerdam, 2017).

*"Everyone is primary responsible for a certain task. It is clear who is responsible for which theme and which organisations have certain interests. In the Dutch model, these responsibilities are divided among many different players. This makes it a strong water governance model, because it is bottom up instead of top-down like in Germany" (Policy advisor Waterschap Rivierenland, 2017).*

However, in the Focus area Linge project, Waterschap Rivierenland tries to implement another form of governance and tries to abandon the idea that the water authority only must focus on their technical water task. The water authority tries to create a more non-technical role for themselves and with that encourage coordination with other governmental authorities. Most of the municipalities are quite positive about this shifting role of Waterschap Rivierenland.

*"It is a good thing that governments foster to create a broader view. In this way it is possible to improve the cooperation between us and the local water authority" (Policy employee 1 municipality of Overbetuwe, 2017).*

**Principle 2** is about managing water at the right scale(s) and fostering coordination between the different scales by responding to long-term environmental, economic and social objectives and promoting multi-level cooperation among users, stakeholders and levels of government (OECD, 2015). First, as is also mentioned above, Waterschap Rivierenland was initially acting only on the water level and only communicated with other governmental levels when needed. In this case about the Linge the water authority is trying to manage water on different scales and foster coordination between scales, especially with the local scale. Waterschap Rivierenland is seeking contact with various

municipalities and is trying to map all the important stakeholders in this area. The municipalities also find it important to work together.

*"In my opinion it is very important to work together with multiple organisations because of different interests at different scales. If you do not stimulate coordination, adverse interests will develop" (Policy employee municipality of Lingewaard, 2017).*

So, this principle about managing water on the right scale(s) is in the Linge case a current topic. In 2007 the Organisation on maintenance of Linge landscape (Vereniging tot behoud Linge landschap) pointed out that the spillover effect of state and provincial plans to municipal level was bad and that this resulted in fragmentation and erosion of the ambitions of higher authorities. Recently Waterschap Rivierenland took over the initiative to develop a plan for the Linge with their project Focus area Linge. Waterschap Rivierenland is now exploring the possibilities to foster coordination between scales and is examining how the Linge can be managed in a different way, by not only focussing on the technical water part but also on how the Linge can be used in other ways and how actors of different scales must be involved to manage this water governance strategy on the right scales.

*"We are looking for the best possible alignment between functions and usage. It is important that we are aware of the needs and wishes of the different stakeholders at different levels" (Waterschap Rivierenland, 2015a, p. 1).*

**Principle 3** is focussed on policy coherence by stimulating cross-sectional coordination and identifying, assessing and addressing barriers for policy coherence (OECD, 2015). In the Focus area Linge case, policy coherence is an important factor because for a long time there were many different types of policies for the Linge area. This is because there are a lot of governmental organisations involved in this area (Vereniging tot behoud Lingelandschap, 2007). Governmental policies, provincial policies and municipal policies all have some kind of influence on the Linge river and the surrounding area. For example the state which determined Natuurnetwerk Nederland. This

nature network contains existing natural areas, areas where new nature is developed, agricultural areas, six million hectare water and all of the Natura 2000 areas (Rijksoverheid, n.d.-b). Some parts of the Linge area are for example a Natura 2000 area. Here explicit nature conservation laws are active which means that spatial adjustments are not possible, only when there are extraordinary circumstances (Rijksdienst voor ondernemend Nederland, 2016). The protected area of the Linge is categorized as Natura 2000 area number 70 (see figure 13).



Figure 13 Natura 2000 areas in Rivierenland (Waterschap Rivierenland, 2015)

The Vereniging tot behoud Lingelandschap developed a report in 2007 where was stated that many different parties were formulating plans for the river area (het Riviereengebied), where also the Linge river is located. The multitude of planning was not guiding the Linge landscape development in the desired direction. Many of the state and provincial plans had hardly a spill-over effect in the final municipal land-use plans. Besides, the Linge landscape was in no policy framework or plan seen as a whole, which contributed to lower policy coherence.

With the Focus area Linge project, Waterschap Rivierenland is trying to look at the Linge area as a whole, however this project is still in an very early phase so the water authority is still figuring out how they have to deal with this idea of 'working in an area focussed way'. Although, this is a step in the right direction concerning to reach a situation of overall policy coherence between the water authority and other sectors. In general the interviewees stated that in the Linge area there is not a striking problem concerning policy coherence. Waterschap Rivierenland and municipalities already take into account each other's policies when developing new policy. However, it is kind of a one-way traffic. In the current situation municipalities, organisations and civilians have to take into account the policy of the water authority and not the other way around when it comes to water.

*"The water authority is primarily responsible for this river. If we want to do something, we have to discuss it with Waterschap Rivierenland. We will never execute something without consulting the water authority"* (Project leader municipality of Tiel, 2017).

*"As municipality we have very little responsibilities, in the water field we do not have a say in things, that is the water authority's terrain. I am policy employee 'water' however, I don't have the means to do something"* (Policy employee municipality of Geldermalsen, 2017).

*"Individuals know that they have to contact Waterschap Rivierenland to check if their plans fit in the rules and policy of the local water authority"* (Policy employee municipality of Gorinchem, 2017).

While municipalities are taking into account the water authority's policy, there is still some friction between water and land use policies pointed out by the interviewees. Waterschap Rivierenland has a strict mooring place policy (ligplaatsen beleid). According to several interviewees this causes friction with the wishes and projects of municipalities.

*"The municipality of Buuren bought a piece of land to create a marina. However they did not realize that Waterschap Rivierenland has a very strict mooring place policy, so it is not possible for the municipality to actually allow people to berth their boat in this marina"* (Supervisor waterway management 1 Waterschap Rivierenland, 2017).

*"There where it is allowed to sail your boat there are some mooring places. However, a mooring place is only useful when you are also allowed to do something on the land there. There is no coordination between those policies"* (Project leader Focus area Linge Waterschap Rivierenland, 2017).

*"At the moment, we are arguing with Waterschap Rivierenland about what kind of boats can be moored on our pier. Nobody is thinking about a common interest"* (Policy employee municipality of Leerdam, 2017).

**Principle 4** is about adapting the level of capacity of responsible authorities to the complexity of water challenges to be met. This can be reached by identifying capacity gaps and matching the level of technical, financial and institutional capacity to the nature of problems and needs (OECD, 2015). A capacity gap is described by the OECD (2011) as:

*"Insufficient scientific, technical or infrastructural capacity of local actors to design and implement water policies as well as relevant strategies".*

The OECD also points out that it is of importance to promote hiring public officials and water professionals independent from political cycles and promote education and training of water professionals to strengthen the capacity of water institutions and foster cooperation and knowledge sharing. In the case about Focus area Linge there is not a complex water challenge that has to be solved. Issues related to capacity or identified gaps were therefore not particularly prominent in the interview data.

*"We don't have a real complex task in the Linge area. The task we gave ourselves is to collect ideas and wishes about the Linge and to see what comes out of that process. We want to take the lead this time"* (Project leader Focus area Linge Waterschap Rivierenland, 2017).

However, Waterschap Rivierenland has a strong focus on technical water management relating to the Linge river as is explained in chapter 3. Because of this, the technical capacity of the local water authority has always been strong. Now that the role of local water authorities and the municipalities is changing to a more horizontal network culture (UVW, 2016), it is not completely clear what this will do to the capacities of Waterschap Rivierenland and the municipalities to handle new problems and needs that come with this horizontal network culture.

*"This shifting concept of governance causes a change in the work field. It is being expected of municipalities to create a broader view, and to decide how to deal with range of tasks together. This is a totally different way of thinking than was the case before. This is a challenge and a quest for everyone"* (Policy employee municipality of Geldermalsen, 2017).

The OECD also pointed out that it is important to promote education and training of water professionals. Waterschap Rivierenland, together with several other regional water authorities, is already working on this advice of the OECD. Together, the regional water authorities developed a traineeship to train and educate young water professionals who can, when they completed their training, help to improve cooperation and strengthen the capacity of the regional water authorities (Waterschapstalent, n.d.).

#### 4.4 Enhancing the efficiency of water governance

The four key concepts of the efficiency theme are data and information, financing, regulatory frameworks and innovative governance (OECD, 2015).

**Principle 5** describes that it is of importance to produce, update and share timely policy relevant water data and information by fostering effective coordination among organisations and agencies and between data producers and users. Use this information and data for guiding and improving water policy (OECD, 2015).

This principle about data and information is something where Waterschap Rivierenland is already aware of. The water authority intends to create customized information for different organisations or people. For municipalities, the water authority tries to customize their information by the account manager concept. The account manager is the first contact point for all sorts of water subjects that are present in a certain municipality (Waterschap Rivierenland, 2017). Municipalities are very positive about this account manager concept as is already elaborated in chapter 3. In the Focus area Linge case Waterschap Rivierenland is encouraging to establish a dialogue with stakeholders and fostering effective coordination among organisations.

*"As Waterschap Rivierenland we want to frame and enlarge the actor network in the Linge area which will result in an area focused process"* (Waterschap Rivierenland, 2015a, p. 1).

The first step in this was to interview municipalities and organisations which have interests around the Linge like Uiterwaarden and Gelders Landschap. With the Focus area Linge project the water authority is trying to foster the dialogue with stakeholders and promoting stakeholder engagement however not on the field of implementing a water information system. Thus, at the moment there is not an operating water information system to share policy relevant information. This is for the reason that policy scares people according to the interviewees. The water authority is not triggered to develop or implement such a system for sharing information with other organisations or people than governmental organisations.

*"Policy is not something popular to share, in general policy information scares people"* (Policy advisor Waterschap Rivierenland, 2017).

However interviewees also pointed out that in the past there was a system for sharing information about the Linge among (governmental) organisations and stakeholders. This contributed also to policy coherence because relevant information was shared among all stakeholders two times a year.

*"Twice a year there was a major gathering where all stakeholders around the Linge were present. All parties were together at that meeting and all problems were discussed and solved together"* (Supervisor waterway management 1 Waterschap Rivierenland, 2017).

This platform was abolished when all small local water authorities in the River area (Rivierengebied) were incorporated in one main regional water authority, Waterschap Rivierenland. Waterschap Rivierenland is thus aware of the fact that it is important to share information and policy relevant data and around the Linge they had an information system in the past which fostered effective coordination around this river. At this moment, sharing policy relevant information is arranged by



the account manager concept, to share information with municipalities. The Focus area Linge project is by implementing the 'area focused working' concept, experimenting with new ways to bring stakeholders together and sharing information.

**Principle 6** is about ensuring that governance arrangements help mobilise water finance and allocate financial resources in an efficient, transparent and timely manner. This principle can be met by promoting governance arrangements that help water institutions raise the necessary revenues to meet their mandates and carrying out sector reviews and making a strategic financial planning. (OECD, 2015).

In this case about the Linge river, Vereniging tot behoud Linge landschap argued in 2007 that Time and resources could not be deployed efficiently because too many different organisations were involved in the Linge landscape. There were a lot of incentive arrangements, however there were little effective projects around the Linge river. The Focus area Linge project intends to initiate a project which will bring together stakeholders and organisations whom can together initiate and execute effective actions around this river. For each step of the project a certain budget is made available by Waterschap Rivierenland, so financial resources are allocated in an efficient and transparent manner. Besides, it is clear that everyone involved is aware of the fact that financing is an important issue. The common view under the interviewees was not that the efficient allocating of financial resources would be a problem, yet they had the view that the financing itself could be an issue because for this project there is not a real water problem or task present (see also chapter 3).

*"At dike projects there is an assignment with a lot of money available, this is not the case in this project about the Linge which makes it harder to start such a project"* (Policy advisor Waterschap Rivierenland, 2017).

*"I think this Focus area Linge project is about asking stakeholders and civilians what their wishes are and use that to develop sketches or a dream picture about the Linge. However, this often costs a lot of money. You can start the project but then you don't have enough money to execute the project.."* (Policy coordinator Waterschap Rivierenland, 2017).

**Principle 7** states that someone has to ensure that sound water management regulatory frameworks are effectively implemented and enforced in pursuit of the public interest. This can be reached by ensuring a comprehensive, coherent and predictable legal and institutional framework, ensuring that rules, institutions and processes are well coordinated and encouraging the use of regulatory tools like evaluation and consultation mechanisms. Besides, it is of importance to set clear, transparent and proportionate enforcement rules, procedures and tools. To achieve this principle, according to the OECD it is important to encourage the use of regulatory tools (evaluation and consultation mechanisms) to foster the quality of regulatory processes and make the results accessible to the public (OECD, 2015).

In this case about the Focus area Linge project, the interviews with the Supervisors waterway management of Waterschap Rivierenland pointed out that in the past there was a consultation mechanism to ensure that rules and issues around the Linge river were well-coordinated. This platform is also described in principle 5 about the sharing of policy relevant information. However this consultation mechanism was abolished when all the small water authorities were incorporated in one large regional water authority, Waterschap Rivierenland. When interviewees were asked about current regulatory frameworks around the Linge, the common view under the municipalities was that sometimes the rules of the regional water authority are very strict especially when it comes to the mooring place policy, as is also explained in principle 3 about policy coherence.

*"There are some differences of interest about the mooring place topic. There is a lack of coordination on this subject. We sometimes ask for more than what is officially allowed by the local water authority"*  
(Policy employee municipality of Geldermalsen, 2017).

Thus, regulatory frameworks are effectively implemented and working, because municipalities, organisations and civilians know they have to obey the rules of Waterschap Rivierenland, however the question is if this is in the pursuit of the public interest.

**Principle 8** is about promoting the adoption and implementation of innovative water governance practices. To reach that someone has to encourage experimentation and pilot-testing on water governance, promote social learning to facilitate dialogue and consensus building, promote innovative ways to cooperate and promote a strong science-policy interface to contribute to better water governance and bridge the divide between scientific findings and water governance practices (OECD, 2015). Public sector innovation is about finding new means to achieve public ends (OECD, 2017a).

*"The Focus area Linge project initiated by Waterschap Rivierenland is a good example of trying to stimulate innovative governance"* (Project leader International Unie van Waterschappen, 2017).

As is explained before in chapter 2, this project is kind of a pilot project of Waterschap Rivierenland to experiment with another form of governing their water. According to the OECD, to stimulate innovative governance, it is important to encourage this kind of pilot tests and is it besides important to stimulate innovative forms of cooperation (OECD, 2015). Waterschap Rivierenland states also that they find it important to cooperate with civilians, companies and organisations and that they use innovative forms of cooperation to manage this cooperation (Waterschap Rivierenland, n.d.). The OECD (2015) also mentioned that it is important to stimulate innovative forms of cooperation to improve synergy among sectors. However, this is still a water governance challenge as is elaborated in chapter 3. To improve this synergies among sectors Waterschap Rivierenland introduced the account manager concept which is elaborated in chapter 3, and in the Focus area Linge project Waterschap Rivierenland is introducing a whole new way of looking at a river basin. With the introduction of area focussed working, the water managers have to involve other sectors in their plans and not only develop a plan with their tunnel vision on the technical aspects of water.

However, it is still not clear for every employee at this water authority how they must stimulate innovative manners for cooperation and what 'innovative forms of cooperation' they can use. This is being acknowledged by the project leader of the Focus area Linge project.

*"The question for me is how to handle this, this area focused view in this project about the Linge. I don't think we have to gather a meeting with everybody of importance for this area and then ask for ideas or inspirations. I am looking for new possibilities how to execute this.."* (Project leader Focus area Linge Waterschap Rivierenland, 2017).

#### **4.5 Enhancing trust and engagement in water governance**

The key concepts of these four principles are monitoring and evaluation, integrity and transparency, stakeholder engagement and trade-offs across users, rural and urban areas and generations.

**Principle 9** is about to mainstream integrity and transparency practices across water policies, water institutions and water governance frameworks for greater accountability and trust in decision-making. This principle can be reached through promoting legal frameworks that hold decision-makers and stakeholders accountable, encouraging norms, on integrity and transparency in national

or local contexts, and adopting multi-stakeholder approaches to identify transparency or integrity gaps (OECD, 2015). For Waterschap Rivierenland, transparency is an important subject.

*"The organisation must take care of a transparent responsibility about the execution of management decisions and task execution in general"* (Waterschap Rivierenland, 2015b).

Focus area Linge is a very small project which is still in a beginning phase. This makes it difficult to examine potential transparency gaps. None of the interviewees mentioned issues about transparency in the Linge project or with water governance on the local scale. However, Waterschap Rivierenland is well aware of the importance of the transparency principle, because it helps to create public support for their actions and increase the quality of their plans. Also municipalities are aware of the fact that transparency is an important theme in water governance on the local scale.

*"I would really like it when Waterschap Rivierenland becomes more and more transparent. I think it is a good thing to be transparent about what we do and how we do it, because this also evokes countervailing power. This will improve the quality of our working methods"* (Policy coordinator Waterschap Rivierenland, 2017).

*"It is always about if our directors can find your directors, and it is important that they do this in a fair and transparent way"* (Policy employee municipality of Leerdam, 2017).

**Principle 10** is about promoting stakeholder engagement for informed and outcome-oriented contributions to water policy design and implementation through mapping public, private and non-profit actors who have a stake in the outcome or who are likely to be affected by water-related decisions, and assess the process and outcomes of stakeholder engagement to learn, adjust and improve accordingly, including the evaluation of costs and benefits of engagement processes (OECD, 2015). Rogers & Hall already stated in 2003 that stakeholder involvement is important on the local level. They stated:

*"One of the most important goals of water policy and the process of its formulation is [...] that key actors or stakeholders must be involved in the process. The effective governance of water resources will require commitment of governmental organisations and various actors in civil society"* (Rogers & Hall, 2003, p. 16 & 17).

Stakeholder engagement is different from participation. Participation refers to the involvement of individuals and groups in the design, implementation and evaluation of a project or plan. Engagement involves a broader range of inclusive processes, with different intentions and different inputs to the decision-making process (Akhmouch & Clavreul, 2016). However, both individuals and (organized) groups can act as stakeholders, stemming from either the scientific, policy or society domain, according to van Ast and Gerrits (2017). Recently, participation in public decision making over water governance has become increasingly common throughout Western Europe. Participation increases the transparency of a decision making process (van Ast & Gerrits, 2017). Also employees of Waterschap Rivierenland reacted quite positive about stakeholder engagement and participation. They acknowledge that participation is becoming a more important topic at Waterschap Rivierenland.

*"Participation and stakeholder involvement is very valuable for the quality of plans. It is valuable for inhabitants and besides it is also beneficial for our organisation because it will improve water awareness"* (Policy coordinator Waterschap Rivierenland, 2017).

*"We have to get to work with civilians and organisations. We are already taking steps here as water authority. In the past we were a very closed, water focussed organisation. This is now changing to a more open organisation"* (Policy advisor Waterschap Rivierenland, 2017).

According to the Unie van Waterschappen (2017), stakeholder engagement is an important factor to build trust, which leads to good water governance. The function of regional water authorities is based on 'stakeholder participation' and the principle that stakeholders pay a regional tax and because of that they have a say in the water authority governing body (UVW, 2017). When asked about participation and stakeholder engagement, interviewees admitted that it is an important theme as is explained above. However, there is a lack of a clear system for participation. Also in the Focus area Linge project it is unclear how to handle stakeholder involvement and participation in the best way. The mapping of stakeholders did take place. However how to deal with involving these stakeholders and civilians is the next step.

*"I am trying to examine what is of interest in this area and how I must collect ideas from stakeholders and civilians" (Project leader Focus area Linge Waterschap Rivierenland, 2017).*

*"This stakeholder engagement principle is something that is still in a development phase, it is hard to find the perfect manner for stakeholder engagement" (Project leader International Unie van Waterschappen, 2017).*

At local level in the Linge case, municipalities are more concerned with participation than stakeholder engagement. Municipalities see participation more as an obligation and something that slows the process down and also they need guidance for how to handle participation.

*"Nowadays it is almost impossible for us to do something without involving inhabitants. In my opinion participation has carried on a bit too far. Nowadays it is the situation that with every tile we turn we have to ask the inhabitants of a street their opinion" (Policy employee municipality of Gorinchem, 2017).*

*"Participation and stakeholder engagement are beautiful modern terms, however everybody is still discovering what it means. At what level do you have to involve stakeholders without losing your aim out of sight? Who is participating? These are questions we are still struggling with" (Policy employee municipality of Geldermalsen, 2017).*

Van Ast and Gerrits (2017) argued that the involvement of stakeholders in decision-making is expected to solve implementation problems of policy decisions, to increase the social acceptance of policy measures, to meet democratic ideals and to enhance transparency of, and trust in, policy and regulations. This is also the aim of the OECD with this participation principle. However, a clear action plan for executing participation is missing at local scale. In the Linge case both Waterschap Rivierenland and the municipalities do not know how to handle participation in a way that it will contribute to implement a new form of governance in the Linge area.

**Principle 11** is about encouraging water governance frameworks that help manage trade-offs across water users, rural and urban areas, and generations. This principle can be reached by promoting non-discriminatory participation in decision-making across people (especially vulnerable groups), empowering local authorities and users to identify and address barriers to access quality water services and resources, promoting public debate on the risks and costs associated with too much too little or too polluted water (OECD, 2015). This principle is not applicable to the Focus area Linge case in this phase. The Focus area Linge project is not about managing vulnerable groups or too much, too little or too polluted water and in this beginning phase of the project issues of managing trade-offs don't play a role.

*"The Focus area Linge project in this beginning phase is about collecting ideas and mapping all the stakeholders in the area. This has as aim to identify on which parts of the Linge the focus must be concentrated in the future" (Waterschap Rivierenland 2015b).*

**Principle 12** states that it is important to promote regular monitoring and evaluation of water policy and governance where appropriate, share this results with the public and make adjustments when needed through developing reliable monitoring and reporting mechanisms, encouraging timely and transparent sharing of the evaluation results and adapting strategies as new information become available (OECD, 2015). When asked about evaluation and monitoring and sharing information with the public, the common view is that this happens too little although it is important.

*"The sharing of information is too limited. However, sharing information improves transparency which improves the quality of our working methods"* (Policy coordinator Waterschap Rivierenland, 2017).

*"Sharing information is not something we are good at"* (Policy employee 2 municipality of Overbetuwe, 2017).

*"We do share results of a project, however we don't share information about processes"* (Policy employee municipality of Leerdam, 2017).

Interviewees pointed out that evaluations of processes do take place, but not very often or in an effective way.

*"There is a lack of standardized evaluation methods and evaluation costs time"* (Project leader International Unie van Waterschappen, 2017).

*"The water authority does evaluate their Water management plan. However they start evaluating when the new water management plan is already in full development"* (Policy coordinator Waterschap Rivierenland, 2017).

Both the regional water authority and the municipalities acknowledge that evaluation and monitoring of processes is important, however this is something that is lagging behind. Only results of projects are being shared with the public, not evaluation of water policies because as is already pointed out by a water manger in principle 5 about sharing data and information policy is not something popular to share. To improve monitoring and evaluation of water governance and water policies on the local scale there is need for a standardized method where water managers and municipalities can hold on to.

#### **4.6 Conclusion:**

Most of the interviewees were not familiar with the existence of the OECD Principles on Water Governance. Nevertheless they had the common view that a lot of the principles are already factors which are taken into account in a water governance system or a policy implementing process, despite the fact that (governmental) organisations are not aware of the existence of the OECD Principles on Water Governance. The principles can bring some awareness among (governmental) organisations for handling a water governance process, which can increase the effectiveness of policy outcomes. When examining how each of the principles works out in the Linge case, it also stands out that a large part of the principles are already (partly) working out in practice, despite the fact that nobody was aware of the existence of the OECD Principles on Water Governance. All interviewees had for example the common view that roles and responsibilities are very well allocated in the Linge river area (principle 1).

This case about the Linge river can be seen as an example of innovative governance (principle 8), because this project is a pilot project in experimenting with a new form of water governance. Some of the principles deserve some extra attention in the Focus area Linge project. For example the principle about policy coherence (principle 3), where municipalities have more wishes than Waterschap Rivierenland allows. Another striking issue is that stakeholder involvement and participation (principle 10) is becoming increasingly important, however there is a lack of a system

for handling stakeholder involvement and participation. This was also indicated as a water governance challenge in chapter 3.

When asking about the usefulness of this OECD Principles on Water Governance framework, a division can be seen between the water managers and the municipalities in the willingness to understand and use the principles. Most municipalities had the view that the principles in their current form are too abstract or too vague to apply to their water tasks on the local scale. Municipalities see the OECD governance principles as a report they would read, however they would not really start to use it, because they don't understand how these principles can be used. Beside the fact that they don't understand the principles, at most of the municipalities in this case there is no willingness for understanding the principles. In this case, the municipalities are relatively small and there is often not a separate function for water, it is not a priority task. This is already elaborated in chapter 3 as a water governance challenge. This challenge causes the lack of willingness to understand or use the principles. In contrast to the municipalities, the water managers were far more positive about the usefulness of the principles. Water is their priority task and they want to govern water in the best way possible. Water managers are therefore very open for new knowledge and new frameworks that can help govern their water in a better way. Summarizing, there is a partly misfit of the principles to the local scale. The principles do fit the water governance of the water authority, however they do not (yet) fit the way of working of municipalities.

# Chapter 5: Coping with the (mis)fit of the OECD Principles on Water Governance

The previous chapters showed that the OECD Principles on Water Governance don't entirely fit water governance on the local scale. According to Moss (2004) effective implementation is dependent not on the policy type per se but on the degree of congruence-'fit' -with existing institutional structures and practices. In this case the policy-practice gap contains the implementation of the OECD Principles on Water Governance in water governance practice on the local scale. Several water governance challenges described in chapter 3 contribute to this misfit. The principles do fit the part of water governance on the local scale where the water authorities are in charge, but they don't fit the municipality working practice. Interviewees from both organisations have a common view on why the principles don't fit water governance on the local scale perfectly. Beside the common view of the interviewees for this case, literature provides contextual knowledge about the gap between policy design and practice. This research about the fit of the OECD Principles on Water Governance can be embedded in the broader context of the policy-practice gap. For this reason, this chapter will first examine the existing literature about the policy-practice gap and possible solutions described in literature to decrease the policy-practice gap. After this, the chapter describes how this case about the OECD principles is embedded in the broader context of the policy-practice gap and how to cope with the gap between the OECD Principles on Water Governance and water governance on the local scale.

## 5.1 Policy implementation failure factors

According to literature, implementation challenges are common in water resources planning and management (Barrett, 2004; Mitchell, 2011). The effective implementation of integrated water policies is not occurring globally, creating what is known as a 'policy-implementation gap', which is the difficult process of moving from policy to action (Barbosa et al., 2016). Barrett (2004) described in her article about implementation studies four reasons which divide the gap between policy and implementation. First the lack of clear policy objectives; leaving room for differential interpretation and discretion in action, second a multiplicity of actors and agencies involved in implementation; problems of communication and coordination between 'the links in the chain', the third factor consists of interest differences between actors and agencies; problems of differing perspectives and priorities affecting policy interpretations and motivation for implementation. The last factor that causes policy implementation failure is relative autonomies among implementing agencies; limits of administrative control.

To decrease the gap between policy and practice the traditional view on policy implementation must be challenged. Implementation should be regarded as an integral and continuing part of the political policy process rather than an administrative follow-on (Barrett, 2004). There is need for vertical and horizontal cooperation between different sectors and levels of authority (Camagni, 2017). Mitchell (2011) pointed out that also in the water sector more attention is needed for the policy-implementation gap, because in water management and governance the implementation gap seems hard to overcome due to complex interconnections with the land base and other resource systems. Despite several studies about policy implementation, it is still difficult to frame a theory of policy implementation. This difficulty exists mainly because it is a complex field and most studies are composed by single case studies. There is lack of a theoretical framework (deLeon & deLeon, 2002). However, it can be difficult to develop a theoretical framework for policy implementation because some policies can be quite broad, with vague goals and objectives. This also makes it hard to determine implementation of such policies and often indicators to measure implementation usually are not defined by the policy or cannot be quantified, which leads to a discussion regarding how to determine its success (Barbosa et al., 2016).

### 5.1.1 OECD principles and the local scale

Also the OECD Principles on Water Governance in their current form will face implementation failure in water governance practice. The policy objective of the OECD principles is to encourage conversations, stimulate discussions about water governance and overcome the multi-level water governance gaps (see figure 11 in chapter 4). However, one of the critics of many interviewees was that the principles are too abstract (see chapter 4.2) and that the principles leave too much room for interpretation which makes it for municipalities difficult to understand how to use the them and discuss about them. Because the principles are too vague or too abstract, nobody knows how to interpret these principles for their level of water governance, in this case the local scale. A common heard statement under the interviewees was the need for a translation of the principles to a more concrete level.

*"I find these principles too vague, I think that if you want to improve coordination in the water sector everybody needs to understand a framework at once. If everybody have another interpretation, than this framework fails to achieve its objective"* (Policy employee 1 municipality of Lingewaard, 2017).

*"I quit reading at principle 2, I think this framework overshoots its mark. It has to be translated to something more practical"* (Policy employee 2 municipality of Lingewaard, 2017).

Thus, the objective of the Principles on Water Governance may be clear, however the principles itself are too abstract, especially for municipalities. Also the OECD recognizes that different rationales create obstacles for adopting targets or a strategy. The OECD (2011, p. 32) describes this as the 'objective gap':

*"Different rationales creating obstacles for adopting convergent targets, especially in case of motivational gap (referring to the problems reducing the political will to engage substantially in organising the water sector)"*.

This lack of clearness about how to use the principles and the room for interpretation is an important reason for the lack of political will of municipalities to engage in understanding and using the principles, it increases the motivational gap. This lack of motivation and willingness of municipalities for understanding and using the principles will make it hinder the implementation of the Principles on Water Governance at the local scale.

Another problem described in literature can be seen in this case about implementing the Principles on Water Governance on the local scale. There are interest or priority differences between actors and agencies which affects policy interpretations and motivation for implementation. As is explained in Chapter 3 about water governance challenges on the local scale, water is not a priority task for municipalities. They have a low level of involvement in water issues, because water is the priority task of the Local Water Authorities. Therefore there is little motivation among municipalities to apply or use these OECD Principles on Water Governance. This is in contrast to the regional water authorities. Water managers are willing to understand and use the Principles on Water Governance, because their main interest is water.

*"This differences in interest between municipalities and regional water authorities often causes a mismatch in coordination and communication between those two organisations"* (Project leader International Unie van Waterschappen, 2017)



The last factor that causes the misfit of the Principles on Water Governance to water governance on the local scale is that not every place or governmental level is the same, or has to deal with the same issues. One recipe or template does not always work for every situation (Mitchell, 2011). Because of the generality of the principles, municipalities don't understand how to use these principles and they stress the need for a further translation of the principles so that they are applicable to the water tasks of municipalities on the local scale.

*"These principles are developed somewhere on a high level, or in science, but I don't understand how to use these principles in practice"* (Policy employee municipality of Gorinchem, 2017)

*"Try translating this to water governance practice. It's too abstract however I doubt if translation is possible. There is a gap between the principles and practice"* (Project leader municipality of Gorinchem, 2017).

The OECD does understand the fact that there is no one-size-fits-all solution to water challenges worldwide (OECD, 2015). However, they still stated that the OECD Principles on Water Governance can be applied at every governmental level (Akhmouch & Correia, 2016). It is clear that, in the current form of the principles, this is not the case because according to the interviewees the principles in their current form are too abstract to apply to water governance on the local scale. Since in the current situation a policy-implementation gap exists between the principles and the local scale, implementation of the principles in the current situation will not work out at the local scale.

### 5.3 Coping with a policy-implementation gap

According to the previous paragraph, there is a policy-implementation gap between the OECD Principles on Water Governance and water governance on the local scale because of several reasons. The question arises: 'How to cope with this misfit to the local scale?' Mitchell (2011, p. 58) introduced several considerations for greater policy implementation success.

1. Importance of context or local conditions
2. Necessity of a long-term perspective
3. Need for a vision outlining the future desired condition
4. Create legitimacy for the proposed direction and means to realize it
5. Ensure one or more leaders or champions are in place
6. Share or redistribute power to facilitate change
7. Adopt a multi-stakeholder approach to incorporate various interests
8. Acknowledge that turbulence and uncertainty will be encountered
9. Commit up-front to monitor and assess results
10. Note that high quality communication is essential
11. Use demonstration projects wherever possible
12. Celebrate accomplishments, with credit openly acknowledged

In his considerations, Mitchell (2011) pointed out that that when implementing a policy or strategy that has to do with water, one has to be aware of the importance of the context or local conditions, because water is above all often a local issue. Water ideally requires place-based planning and custom designed solutions to reflect site-specific conditions and needs. Also Barbosa et al. (2016) mentioned the importance of paying attention to the local level. In their research case about water policy implementation in São Paulo, the local government had low level of involvement in implementing water policy. Their research showed that water policy implementation challenges and go beyond the water sector. The researchers explained that full implementation will not occur by improving actions in the water sector alone and that there is need for commitment by

representatives of upper governmental levels, to help the involvement of lower governmental levels and other sectors (Barbosa et al., 2016). Often strategies or policies are developed for application across a broad region, so standardized approaches are developed. The OECD Principles on Water Governance are an example of such a standardized approach, it is one framework for every governmental level (Akhmouch & Correia, 2016). However, not every place is the same. One recipe or template does not always work for every situation (Mitchell, 2011), as is also the case with the OECD Principles on Water Governance and applying them to the local scale.

Consideration number 10 states that high quality communication is essential. In this consideration Mitchell (2011) points out that communication in plain language that everyone understands is critical to achieving goals. Targets of a certain policy must be treated as more than passive recipients of publicly initiated effort, the targets are among parties who have to be active toward implementation (O'Toole Jr., 2000), good communication is essential for this. Also Makinde (2005) stated that communication is an essential ingredient for effective implementation of policy. This is something that clearly is failing with the OECD Principles on Water Governance on the local scale. As is elaborated in the previous paragraphs, the common view under the municipalities is that the principles are too abstract for them. Communication is a time-consuming activity, but is very important. Messages must be communicated a number of different ways and many different times in order for them to be clearly understood (Mitchell, 2011). Another consideration that is of importance to this case about fitting the principles to the local scale is that demonstration projects that are tangible and visible are important because most people relate to concrete examples when trying to envisage a strategy or policy (Mitchell, 2011). With the implementing of the OECD Principles on Water Governance, there is still a lack of examples or demonstration projects because the principles are recently developed. Also the OECD (n.d., OECD Water Governance Programme) admits that there is a need for examples and experiences:

*"There is now an urgent need to take stock of recent experiences, identify good practices and develop practical tools to assist different levels of governments and other stakeholders in engaging effective, fair and sustainable water policies".*

#### **5.4 How to cope with the misfit of the OECD Principles on Water Governance?**

The above elaborated factors cause a gap between the purpose of the principles and the usefulness of the principles on the local governmental level. Before implementing the principles it is important to understand how to cope with this misfit of the principles to the local scale. Out of this research two options for coping with the misfit of the OECD Principles on Water Governance to the local scale came forward.

##### **Option 1: Translation of the principles to a more concrete level**

Mitchell (2011) already wrote down several considerations to improve the policy implementation process in the water sector. One outstanding consideration is that the OECD has to take into account the local scale, because water is eventually a local issue. In this research case about Focus area Linge, the interviewees had the common view that the principles are too abstract to implement them in water governance at the local scale. Employees may have a more open attitude against the principles, however also they stress the need for concretisation of the principles.

*"I think these principles can be useful, however in their current form these principles are still general terms. Different views of the principles are possible. Nevertheless, I would like to use these principles to start a discussion about how our organisation works"* (Policy advisor 1 Waterschap Rivierenland, 2017).

All the interviewees had a strong view about the usefulness of the principles and stressed the need for a translation of the principles from their abstract level to the locational specific context (see paragraph 5.1.1). Especially municipalities stressed the need for translation of the principles to a more practical level, because in their current form they are too abstract and there is too much room

for interpretation which decreases the motivation and willingness of municipalities for using the principles. If the principles are also meant for municipalities to use, a translation of the principles to a more concrete level is necessary. However, it is questionable if the intention of the OECD is for municipalities to use the Principles on Water Governance and if municipalities must be bothered with the principles at all, because if the principles will be translated to a more practical level, the principles aren't a general framework anymore.

#### **Option 2: Implement the principles only at the regional water authorities**

This question gives cause for option 2: On the local scale in the Netherlands, only implement the principles at the regional water authorities. On this way, the principle framework can stay the same and the problem at municipalities of willingness for using and understanding the principles is not an issue anymore.

*"It is possibly the best way to only implement the OECD principles at the regional water authorities. The Local Water Authorities can then translate the principles when necessary to municipalities and other actors involved in water governance at the local scale"* (Project leader International Unie van Waterschappen, 2017).

This project leader of the Unie van Waterschappen also pointed out that it is important to make clear to possible users that the OECD Principles on Water Governance are not meant as a strict framework that an organisation must follow. The principles must be seen as a guideline, to trigger conversation among actors in the water sector. The principles can be used as a reference to see if the implementation of a strategy or policy is moving in the right direction. However, there is a need for clear communication about the aim the principles and how and by whom they can be used, otherwise implementation of the principles will fail. For clearly communicating how the principles can be used at all different governmental levels, there is also need for demonstration projects, as was also indicated by Mitchell (2011) as an important factor for policy implementation. Besides there is a need for much dissemination work on the local scale, because not one interviewee was aware of the existence of the principles as is elaborated in Chapter 4.2.

*"For Dutch governments a method for implementing the principles will be by training and workshops"* (Project leader International, Unie van Waterschappen, 2017).

*"Because the principles are in a developing phase there is a need for collecting cases and examples to explore how the OECD Principles on Water Governance work out in practice. We need to share these learning experiences with each other"* (Project leader International, Unie van Waterschappen, 2017).

### **5.5 How the OECD is coping with implementing the principles**

In contrast to Barbosta et al. (2016) who stated that policies often don't include indicator indicators to measure implementation success, the OECD itself is exploring the best way to implement the Principles on Water Governance. The OECD agrees with the fact that demonstration projects or examples are critical for implementing a strategy or policy. The OECD wants to support the implementation of the OECD Principles on Water Governance in interested member and non-member countries by scaling up best practices and contributing to the development of indicators (OECD, 2016a).

The OECD developed two working groups to support the implementation of the principles. The first working group will collect best practices on each of the twelve principles. This collection of best practices will foster bench-learning among governments and stakeholders on each of the twelve Principles (Akhmouch & Correia, 2016) and foster peer-to-peer dialogues within and across cities, basins and countries facing similar types of challenges. The best practices will support evidence-based analysis on the state of play of water governance against the OECD Principles (OECD, 2016a). This collection of best practices will also contribute to the development of Water Governance

Indicators which is the task of the second working group. These Water Governance Indicators can support better implementation of the Principles on Water Governance (Akhmouch & Correia, 2016). The second working group which develops the Water Governance Indicators will share knowledge and experience on water governance indicators and measurement tools to help interested countries understand whether governance systems are performing well and delivering expected outcomes (OECD, 2016a). The OECD already did some pilot tests with the Water Governance Indicators to learn the best way to develop the Water Governance Indicators. These pilot tests and the lessons that could be learned from those pilot tests were discussed during the 9th Meeting on Water Governance (see Appendix F).

The objective of the OECD is thus to develop a systematic framework to measure water governance (OECD, 2015a). The Water Governance Indicators will contribute to mainstream good governance into daily practices of governments and stakeholders, the indicators will assist governments in improving the water policy cycle and finally they will provide stakeholders with an indication of the role they can play to contribute to positive spillovers on water governance, alongside policymakers (OECD, 2015a). The OECD is thus especially focussing on quantitative methods for 'measuring' the principles. However, as was already point out in chapter 2 there is also a need for in-depth analyses to provide detailed information about how principles are received in practice by potential users and how the principles work out at all different governmental levels.

*"Customized research is needed to gain knowledge about the principles. We are still in a learning process"* (Project leader International Unie van Waterschappen, 2017).

## 5.6 Conclusion

The case of implementing the OECD Principles on Water Governance on the local scale fits in the broader context of the policy-practice gap. Factors like room for differential interpretation or priority differences (which is also described in chapter 3) increase the misfit of the principles to the local scale. Another important factor is the fact that not every governmental level has to deal with the same water governance issues. One recipe or template does not always work for every situation. This causes the lack of political will under municipalities to understand and use the principles. To cope with this misfit of the OECD Principles on Water Governance to the local scale two options came forward from this research. The first option states that it is important to reconsider the generality of this framework, because in their current form the principles are useless for municipalities on the local scale. The second option to improve the fit of the principles to the local scale is to only focus on the regional water authorities when implementing the principles, so that the water authorities can translate them in an appropriate way to the municipalities. For this option the principle framework can stay the same and the problem at municipalities of willingness for using and understanding the principles is not an issue anymore. Above this all, it is important to communicate very clearly about the aim of the principles, who can use them and how they can be used, because at the moment this is not clear at the local scale. To improve communication about the principles there is a need for the collecting of demonstration projects or as it is called by the OECD: good practices.

The OECD itself is already exploring the best way for implementing the Principles on Water Governance by collecting good practices and scaling them up. This collection of best practices will contribute to the development of Water Governance Indicators which can support better implementation of the Principles on Water Governance. The OECD is already doing pilot tests with the Water Governance Indicators to develop the best way for using the indicators. The OECD thus focuses especially on quantitative methods for measuring how the principles work out. However, there is also a need for more in-depth research to gain detailed knowledge about the principles and how they work out in practice on for example the local scale; customized research is needed.

## Chapter 6: Conclusion & Discussion

This research has explored in a qualitative way how the Principles on Water Governance of the OECD fit water governance on the local scale. In this chapter first a reflection on the research methods is described. After this, the answers on the sub-questions are elaborated. These answers together will provide an answer on the main question of this research. The central question for this research was: *How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with them?* Finally, with a description about how this research contributes to the public debate and scientific literature this chapter will be finished.

### 6.1 Limitations of this research

As is already mentioned in chapter 2, water governance is something that is hard to measure because water governance is very complex, encompasses multiple dimensions and involves multiple actors at different levels of government, in the public and private sector. The context of water governance is uncertain and it is also difficult to examine causal relations of water governance. However, to examine this research in the best possible way, the methods used are qualitative research methods. The research methods chosen for this research can raise some questions about validity, reliability and how representative this research is, because concepts like this cannot be addressed in the same way as in quantitative research. However, in qualitative research other concepts are used to ensure the trustworthiness of a study. Credibility (in preference to internal validity), transferability (in preference to external validity or generalisability), dependability (in preference to reliability) and confirmability (in preference to objectivity).

To overcome the issue of credibility, in this research almost every important person for the case about the Linge was being interviewed. Only one municipality around the Linge was missing because they didn't respond to the interview request. Yet, it would have increased the credibility of this research when also this municipality had been interviewed. However, to increase the credibility of this research, the concept of triangulation (involving the use of different research methods) is used. This research exists of a combination of literature study, a case study and semi-structured interviews within that case study. Also a meeting took place with an expert on the OECD governance principles of the Unie van Waterschappen to present the findings and results of this research to him. This conversation was very useful as a verification instrument to check if the results of this research were credible. Beside this combination of research methods, I was also present at the 9th Meeting on Water Governance of the OECD in Paris. My presence at this meeting helped me to gain detailed in-depth knowledge about the OECD Principles on Water Governance and use this knowledge for my research by strengthening my interview topics and collect knowledge about other research cases where the Principles on Water Governance are involved. Finally, to help ensure the honesty of the informants for this research it was made clear to the interviewees that their names would not be used in this research. Besides, everybody who was approached for an interview was given the chance to refuse to participate, so only the people who really wanted to take part were being interviewed. In the interviews iterative questioning was used when contradictions appeared.

Because this research is specific about how the OECD Principles on Water Governance fit to water governance on the local scale in a case about the Linge river, it is impossible state that these findings are also applicable to for example the whole local scale in the Netherlands. That it is hard to transfer the results immediately to a larger context can be seen as a disadvantage. However, while this case study is unique, it can serve as an example in a larger group of case studies on the local scale. The format of this case study can be used again in other water management areas in the Netherlands to examine how the Principles on Water Governance fit to the local scale. Eventually results of all case studies can be combined to draw general conclusions about how the OECD Principles on Water Governance fit the local scale in the Netherlands.

The dependability of this research is met by a detailed description of the research process. This will enable readers of this research to develop a clear understanding of the research methods. For every sub-question is described in chapter 2 what research methods are used and how those methods are used to examine the question. Also in the appendices the interview process and topic list is being described in detail, and all the interviews were recorded so it was not possible to doubt about statements of the interviewees. Only the conversation with the Project leader International of the Unie van Waterschappen was not recorded, however detailed notes were taken during that conversation. All interviews have been transcribed. This document can be made available to a future researcher if he or she would like to repeat this research process in another case.

Finally there is the issue of conformability, instead of objectivity in quantitative research. For this issue it is important to make clear that the findings of the research are the result of the experiences and thoughts of the interviewees and not the view of the researcher. In this research there is taken account of conformability by triangulation. As is elaborated above a mix of research methods is used and also a conversation with an expert on the OECD Principles on Water Governance to mirror the findings to his knowledge in order to verify the reality of the results.

### 6.1.1 Case study

As part of this research an explanatory case study was used to examine the OECD Principles on Water Governance closely in order to explain how the OECD Principles on Water Governance fit the water governance context on the local scale. The design chosen for this research is a case study about the local water authority Waterschap Rivierenland and their project about the Linge river and conducting semi structured interviews. A common heard critic on using case study as a research method is that it is hard to generalize from one case and that case study research is subjective. It will give too much scope for the researcher's own interpretations which will influence the validity of the research negatively. As is explained above the issue of transferability is indeed hard to overcome in a case study research. However, the concept of this research can be used in other cases on the local scale which in the end can lead to a more general conclusion for the whole local scale. The issue of objectivity has been taken into account by triangulation (semi-structured interviews and literature study) and the reflective conversation with the expert on the OECD Principles on Water Governance of the Unie van Waterschappen.

## 6.2 Water governance challenges on the local scale

The first sub-question of this research '*What does water governance on the local scale look like and what are the water governance challenges?*' has identified how water governance at the local scale works out and what challenges are coming into play, because literature only describes water governance and the challenges of it in general. Examining this research question has shown that water governance in the Netherlands and thus water governance on the local scale is changing. This paradigm shift to a more open and integrated attitude of water managers causes new challenges beside the already existing challenges described in literature. Most of the water governance challenges described in literature in this case are improving, although these improvements are still in an early stage. With the beginning of the project Focus area Linge, Waterschap Rivierenland is starting to explore a new form of water governance and thereby overcoming some of the challenges pointed out in the literature. Waterschap Rivierenland is engaged with the drive to create a more non-technology driven water sector and change their known closed attitude to a more open, not only water task focussed attitude. For this to happen, a change in the way of thinking of the employees is needed. Only if this happens, it is possible to create that non-technical attitude and manage land and water together. However, the critics described in literature about a lack of adequate coordination and communication is something that is going quite well in this research case. The account manager concept improved communication and coordination with the municipalities in their management area. While communication with other governmental levels is going quite well, communication with stakeholders and civilians is something that needs improvement. There is still a lack of standardized mechanisms for participation, in a time where

participation and stakeholder involvement is becoming increasingly important. The OECD finally named the striking awareness gap as a water governance challenge for the Netherlands. The interviewees all endorsed this challenge, however it is the question if this is a real problem. Water management in the Netherlands reaches a very high level. This awareness gap is maybe more a luxury problem than a real water governance challenge, however in the future it is important to overcome this awareness gap because this will help to improve effective policy implementation.

Beside the water governance challenges described in literature also some water governance challenges especially for the local scale appeared. For example that one of the most striking water governance challenges at local scale is that water is for small municipalities not a priority task, while for the local water authority water is the most important task. This causes a mismatch in coordination between these governmental organisations. Small municipalities have many tasks; water is one of them and often don't get the attention that it deserves. In the case of the Linge river this issue makes it hard for municipalities to answer the will of Waterschap Rivierenland for more collaboration in the Linge project. Also financing was named as a water governance challenge for this case. Interviewees associated implementing a new form of water governance with high financial costs which can affect implementation of the area focussed strategy in a negative way. On the one hand, the principles can help to overcome some of the above described challenges. However on the other hand, the new discovered challenges can make it harder to apply the Principles on Water Governance on the local scale.

### 6.3 Influence of the Principles on Water Governance on the local scale

The second sub-question of this research '*How do the OECD governance principles influence water governance at a local scale?*' examined how the Principles on Water Governance are received on local scale and how each of the principles influence water governance on a local scale. Examining this sub-question showed all interviewees were not aware of the existence of the OECD Principles on Water Governance. Nevertheless they had the common view that a lot of the principles are already factors which are taken into account in a water governance system or a policy implementing process, despite the fact that people are not aware of the existence of the principles. In this respect the principles can bring some awareness among (governmental) organisations for handling a water governance process.

Despite the fact that the water managers tend to have barely any knowledge of the principles, they have at least some understanding for the principles. Water is their priority task and they want to govern water in the best way possible. Water managers are therefore very open for new knowledge and new frameworks that can help govern their water better. Municipalities on the other hand don't have a clue for how they should use the principles and they don't have the will for understanding the principles either. The common view under the municipalities is that the principles in their current form are too abstract or too vague to apply to their water tasks on the local scale. Municipalities see the OECD governance principles as a report they would read, however they would not really start to use it, because they don't understand how these principles can be used. They see it as a 'nice' piece of paper that disappears in a filing cabinet after which municipal employees go on with their all day job.

Beside the fact that they don't understand the principles, at most of the municipalities in this case there is no willingness for understanding the principles. In this case, the municipalities are relatively small and there is often not a separate function for water, it is not a priority task. This water governance challenge increases the lack of willingness for understanding the principles. So, even in the Netherlands, at least in this case study, the Principles on Water Governance are kind of a fragmented picture on the local scale. When examining the influence of the principles separately in this case, it stand out that some of them are already used, however in a unconscious way because no one of the interviewees was aware of the existence of the principles. On the other hand, some other principles like stakeholder engagement or monitoring and evaluation are topics that need more

attention and improvement on the local scale. In total, this case about the Linge river can be seen as an example of innovative governance, because this project is a pilot project in experimenting with a new form of water governance. Summarizing, there is a partly misfit of the principles to the local scale. The principles do fit the water governance of the water authority, however they do not (yet) fit the way of working of municipalities.

#### **6.4 Coping with the (mis)fit of the OECD principles to the local scale**

The third sub-question *'How to cope with the fit or misfit of the OECD Principles on Water Governance on a local scale?'* examined how to cope with the partly misfit of the OECD Principles on Water Governance to the local scale. The case of implementing the OECD Principles on Water Governance on the local scale fits in the broader context of the policy-practice gap, however the principles don't entirely fit to the local scale in the current situation.

An important factor for this is the fact that not every governmental level is the same or has to deal with the same water governance issues. One recipe or template does not always work for every situation. Because of the generality of this framework there is room for differential interpretation of the principles. This makes it for municipalities hard to understand and use the principles. The principles are too abstract for them to use this framework for their water tasks. The principles are developed on a high level, but a clear manual for how to apply the principles in practice is missing. Besides, the priority differences also increases the gap between the OECD Principles on Water Governance and water governance on the local scale. As was already described in the first sub-question, water is not a priority task for municipalities. Because of this, municipalities have a low level of involvement in water issues. Therefore there is little motivation or political will among municipalities to apply or use the OECD Principles on Water Governance.

To cope with this misfit of the OECD Principles on Water Governance to the local scale two options came forward from this research. The first option is to reconsider the generality of this framework because in their current form the principles are useless for municipalities on the local scale. This misfit of the OECD Principles on Water Governance to the local scale stresses the need for a further translation of the principles from their abstract level to the locational specific context, so they are applicable to the local scale. The second option to improve the fit of the principles to the local scale is to only focus on the regional water authorities when implementing the principles, so that the water authorities can translate them in an appropriate way to the municipalities and other actors involved in water governance at the local scale. For this option the principle framework can stay the same and the problem at municipalities of willingness for using and understanding the principles is not an issue anymore.

Above this all, it is important to communicate very clearly about the aim of the principles, who can use them and how they can be used, because at the moment this is not clear at the local scale. Besides there is a need for much dissemination work on the local scale, because not one interviewee was aware of the existence of the principles. To improve communication about, and dissemination of the principles there is a need for the collecting of demonstration projects or examples of implementing these principles on the local scale. On this the OECD is already working by collecting and scaling up best practices about the Principles on Water Governance. The OECD will use this collection of best practices develop Water Governance Indicators which can support better implementation of the Principles on Water Governance.

#### **6.5 The misfit of the OECD principles to local scale and how to cope with this**

The answers on the three sub-questions together form the answers on the main question *'How do the twelve OECD Principles on Water Governance fit water governance on the local scale in the Netherlands and how to cope with them?'*. This research shows that water governance on the local scale in this case about the Linge provide several challenges, which can make it eventually harder to apply the OECD governance principles to the local scale. The fact that water is not a priority task for



municipalities creates a mismatch between the will of Waterschap Rivierenland to improve coordination with organisations and other sectors, and the lack of interest of the municipalities for more voluntarily coordination because of their load of tasks. This is one of the reasons that the principles don't fit the local scale entirely. Municipalities have the common view that these principles are far too vague and abstract to use for their working activities. This view is also common under the water managers. However, despite the abstractness of the principles, the water managers had the willingness for trying to understand and learn more about the principles. They think that also in the current form the principles can be useful for water governance on the local scale. To cope with this misfit to the local scale there is the need for a translation to a more concrete level if the OECD wishes that municipalities can also use the principles. The other option to improve the fit of the principles to water governance on the local scale is to only implement them at the regional water authorities. Possibly the best way of using the principles is to use them as a tool for discussion and as a tool water managers can hold on to when leading a policy implementation process. All the factors important for water governance are now put together in one framework, wherein everybody can check how optimal a certain implementation process is developing.

Overall, this research strengthens the idea that the Principles on Water Governance in theory are a useful, fine robust framework to hold on to when implementing new policies or strategies. The principles put together all important factors to pay attention to in a strategy or policy implementation process and increase the awareness about these factors. However to improve the fit of the OECD Principles on Water Governance to the local scale there is a need for a translation of the principles or not implementing them at all governmental organisations who are involved in water governance at the local scale.

## 6.6 Scientific literature and the public debate

The major objective of this research was to examine how the OECD Principles on Water Governance are received in practice on the local scale, and add a valuable field analysis to the existing body of literature. Taken together, the results of this research contributed to the body of scientific literature by starting to fill the gap between water governance studies, studies on the OECD Principles on Water Governance and water governance on the local scale. Until now, no single study existed which investigates the interpretation and usability of the Principles on Water Governance on the local scale. The OECD stated that the principles are applicable to every governmental level, even though there is no research that can prove this. The findings of this study provide insights for the OECD of how their Principles on Water Governance work out in practice and how useful they are for the local scale. The findings of this thesis could be used to help the OECD to improve the applicability of the principles to the local scale.

Beside the literature, water governance is also becoming increasingly important in public society. Because of a future water crisis (too much, too little or too polluted water) it will become more and more important to govern water in a good way to be able to continue using water and prevent flooding. So, in public society there is a need for a system to improve the governance of water to prevent a water crisis. In the Netherlands, this paradigm shift to water governance expresses itself in the New Environmental Planning Act which will foster a more integrated approach on water tasks and create a more horizontal network culture among governmental organisations. This research offers water managers on the local scale insight in how they can use this Principles on Water Governance framework to solve policy implementation issues. It offers water managers a framework to hold on to and encourages them to be aware of factors that are of importance when implementing a new water strategy or policy at the local scale. Beside this, this research also shows water governance actors on the local scale how the principles can best be applied to water governance on the local level and whether it is valuable to make an effort for understanding this framework.

## Chapter 7: Recommendations

This research examined how the OECD Principles on Water Governance fit the local scale. The findings of this research provide several ideas for further research and recommendations for water governance practice. Despite the fact that this research strengthens the idea that the Principles on Water Governance in theory are a useful framework to hold on to when implementing new policies or strategies, this research only examined one case. More case studies like this research are needed to draw conclusions about the fit of the Principles on Water Governance to the whole local scale. Besides, this research concept can also be applied in further research on other levels. There is a lack of knowledge about how the principles fit to water governance on different scales and if this general framework of the Principles on Water Governance is applicable to water governance on all levels in its current form.

This research showed that the OECD Principles on Water Governance are too abstract for municipalities at the local scale. While his study only included a case study on the local scale, the findings do raise new interesting questions about the OECD governance principles. Is it for example necessary to translate the principles to a more concrete level? Or is the other option better: to only implement the principles on the level of the regional water authorities. This is something for the OECD and governmental organisations to think about. The question can be asked if the OECD chose the right applicant for this framework, because they made the choice to create a very general framework that can be applied to every governmental level. However, it can be questioned if one framework always works for every water governance level.

Further research could also be conducted to determine the best way to implement the principles at for example the regional water authorities. Because this research showed that water managers are willing to use the principles, however it is not clear for them how they must them: only as a reference framework or more as a strict guideline? The OECD itself is focussing on quantitative methods (by creating Water Governance Indicators) for measuring how the principles work out and concretising the framework. However, there is also a need for more in-depth research to gain detailed knowledge about the principles and how they work out in practice, because water governance is different for each scale and every country. It is difficult to measure this with hard, quantitative methods, which do not pay attention to the complex water governance context.

Another interesting idea for future investigation is the consideration if this type of format of the OECD Principles on Water Governance is also applicable to other sectors then the water sector. This typical framework is based on a water issue because the OECD sees water as a base for welfare. However a format like this could maybe also be applicable to other sectors like the food or land use sector, because aside from a future water crisis, at some parts the world is already facing a food crisis. It would be interesting to assess the applicability of this kind of format to other sectors, because it can serve as a framework to hold on to for implementing policies. Future research might explore to what extend the principles of the Principles on Water Governance framework can be used and if it is possible at all to apply this format of the OECD Principles on Water Governance to other sectors.

A final recommendation for further research that derives from this study is that more research should be carried out regarding the policy-practice or the policy-implementation gap. There is a lack of (scientific) knowledge about reducing the gap between policies or ideas (like the OECD Principles on Water Governance) and how to implement these. This is unfortunate because this leads to the fact that useful ideas or policies are not being used in practice. Future research in this field will be of great help to decreasing the gap between policy and practice.

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## Appendices

### Appendix A: Semi- structured interview questions

Before the interview, the interview candidates (municipalities and water managers) will be informed about the OECD Principles on Water Governance report in order that the candidates will be aware about the governance principles. Also the Focus area Linge project will be shortly explained in an email to the interviewee. The topic list is sent to the interviewees in the weeks before the interview takes place. In this way, the interviewees have time to think about the questions and to understand them completely. The interviews have been conducted in Dutch.

#### Start of the interview:

The Focus area Linge project will be elaborated in the introduction of the interview. Also the structure of the interview will be explained to interviewee before the interview starts.

#### Interview topics for the first sub-question:

1. Wat verstaat u onder water governance?
2. Wat vindt u van het initiatief van Waterschap Rivierenland om het project Focusgebied Linge op te zetten?
3. Barrières /uitdagingen water governance rond de Linge?

#### Interview topics for the second sub-question:

Before starting with the second part of the interview, the OECD Principles on Water Governance report is explained supplementing to the short explanation by email.

4. Bekendheid met het bestaan van de OECD Principles on Water Governance  
Hoe vormen zich de verschillende principes rond de Linge?
5. Policy coherence
6. Clear roles and responsibilities
7. Evaluation & monitoring
8. Stakeholder involvement & participation
9. Innovative governance
10. Nut van de OECD Principles on Water Governance?
11. Eigen opmerkingen over de principes / topics van belang

#### End of the interview

12. Thanking the interviewee for his or her time and ask the interviewee if he or she want to read the transcription of the interview.

## Appendix B: List of participants interviews

Interview	Organization	Function	Date
1	Waterschap Rivierenland	<b>Interviewee 1: Supervisor Waterway Management</b> (Opzichter vaarwegbeheer) Waterschap Rivierenland. Team peil-, Dijk-, en Vaarwegbeheer. Afdeling Beheer en Onderhoud. Veel kennis over de Linge. Participant heeft vroeger voor het Waterschap van de Linge gewerkt toen dit nog een apart waterschap was.	21-06-2017
		<b>Interviewee 2: Supervisor Waterway Management</b> (Nieuwe Opzichter vaarwegbeheer Waterschap Rivierenland, vervanging vorige opzichter ivm pensioen). Team peil-, Dijk-, en Vaarwegbeheer. Afdeling Beheer en Onderhoud.	
2	Waterschap Rivierenland	<b>Policy advisor (Beleidsadviseur)</b> Waterschap Rivierenland. Watersysteem en Waterketen. Vooral bezig met waterkwaliteit, waterkwantiteit en riolering en waterzuivering. Veel kennis over het project Focusgebied Linge van Waterschap Rivierenland, meegeschreven over dit onderdeel in het waterbeheerplan.	29-06-2017
3	Municipality of Tiel	<b>Interviewee 1: Project leader</b> (projectleider) o.a. ruimte en water & aanspreekpunt voor het waterschap.	04-07-2017
		<b>Interviewee 2: Municipal Archeologist</b> (Gemeentelijk archeoloog) en betrokken in projecten rond de Linge	
4	Municipality of Gorinchem	<b>Interviewee 1: Project leader</b> (projectleider) riolering en water. Op de hoogte van projecten en zaken rond de Linge.	05-07-2017
		<b>Interviewee 2: Policy employee</b> (Beleidsmedewerker) Ruimtelijke economische ontwikkeling. Weet wat er speelt en gebeurt rond de Linge, wat het gebruik is.	
5	Waterschap	<b>Policy coordinator</b>	12-07-2017

	<b>Rivierenland</b>	(Beleidscoördinator), Waterschap Rivierenland. Deze persoon heeft ook meegeschreven aan het waterbeheerplan en heeft daarom veel kennis over het project Focusgebied Linge.	
<b>6</b>	<b>Municipality Overbetuwe</b>	<b>Interviewee 1: Policy employee</b> (Beleidsmedewerker) groen, landschapsbeleid en water, dijkversterkingen en dijk teruglegging.	16-08-2017
		<b>Interviewee 2: Policy employee</b> (Beleidsmedewerker) ruimtelijk en fysieke omgeving, water in het pakket. Aanspreekpunt voor het waterschap	
<b>7</b>	<b>Municipality of Leerdam</b>	<b>Policy employee</b> (Beleidsmedewerker) afdeling Regie, waterbeheer	29-08-2017
<b>8</b>	<b>Municipality of Geldermalsen</b>	<b>Policy employee</b> (Beleidsmedewerker) Water	05-09-2017
<b>9</b>	<b>Municipality of Lingewaard</b>	<b>Interviewee 1: Project leader</b> (projectleider) riolering en water, financiën en beleid en planvorming.	06-09-2017
		<b>Interviewee 2: Policy employee</b> (Beleidsmedewerker) Ruimtelijk beleid	

### Transcriptions

Transcriptions of the interviews are available upon request.

## Appendix C Coding scheme

Theme	
<b>Water governance</b>	What does de interviewee understand under 'water governance' - Challenges/issues in the Linge case
<b>OECD Principles general</b>	- Familiarity with the OECD principles - Usefulness for the local scale - Unconscious use of the principles
<b>OECD principles</b>	How do the different principles influence water governance on the local scale - Policy coherence - Clear roles and responsibilities - Evaluation & monitoring - Stakeholder involvement & participation - Innovative Governance - Other important principles
<b>Coping with the (mis)fit of the principles</b>	- Translation / too abstract

## Appendix D: Conversation with Roelof Bleeker (Dijkgraaf Waterschap Rivierenland)

13-07-2017

- Vanuit de gemeenten is er op zich wel aandacht voor de Linge, maar veel op het gebied van Lingelandjes die gemeente eigenlijk terug wilt kopen (landjepik)
- Het moet een project zijn waar meer sectoren bij worden betrokken en de focus niet alleen ligt op de kerntaken van het waterschap (denk aan cultuurhistorie, recreatie en gebruikskansen)
- Meer kijken naar de Linge als lijn door het gebied
- Niet alleen partijen bij elkaar brengen, maar inspiratie opdoen
- Misschien ideeën voor het gebied opdoen doormiddel van een prijsvraag (burgerparticipatie wordt op die manier aangewakkerd)
- Geldermalsen en Leerdam zijn waarschijnlijk gemeenten die zeker geïnteresseerd zijn om wat meer met de Linge te doen
- Denk aan de ecologische potentie (otters & vissen) en de recreatieve potentie (fietsroutes, wandelpaden, varen)
- Misschien de boven Linge (op lange termijn grond verwerven?) wel scheiden van beneden Linge in potenties?
- Partijen interesseren om mee te doen nadat je iets hebt opgestart (denk aan de Provincie)
- Eigenlijk focusgebied project opdelen in 2 delen: Nu al beginnen met een beeld geven van hoe de Linge nu is, en dan een vervolg deel over de potentie van de Linge (een landschapsarchitect hierbij betrekken?)
- Niet alleen in pr richting denken
- Doe een verkenning op bijzondere manieren. Hierbij misschien kennis opdoen bij mensen van de dijk inspiratietafel.
- Je kunt je richten op één belangrijke potentie (bijv ecologisch → otter vriendelijk maken vd Linge) of per stukje van de Linge kijken waar de focus moet liggen.

## Appendix E: Conversation with an expert on the OECD Principles on Water Governance

### Project leader International, Unie van Waterschappen

- Wiel is een referentie voor hoe je handelt
- Sommige principes gebeuren al → gebruik het als een checklist
- Je kunt het wiel gebruiken om te kijken waar nog aan gewerkt moet worden
- Moet je gemeenten lastigvallen hiermee?
- Gemeenten zijn veel praktischer bezig, hebben andere zorgen (bijv. uitvoering van de omgevingsvisie)
- Doorvertaling moet gebeuren van waterschap naar gemeenten, niet dit document direct aan gemeente presenteren.
- OECD nu bezig met mechanismen om het te laten werken → vooral kwantitatieve methoden (traffic light methode)
- Misschien bij Nederlandse overheden meer implementeren dmv workshops
- Water is voor gemeenten vaak een kleine zorg, terwijl het voor het waterschap juist een grote zorg is → zorgt voor een mismatch
- Daarom is regionale samenwerking nodig, iets wat al steeds meer gebeurt
- Klimaatverandering probleem voor de stad. Werkzaamheden waterschappen verschuiven zich ook meer naar de stad. Er is meer contact nodig met de stad. Waterschappen zijn in het buitengebied tot nu toe veel krachtadiger dan in de stad. Moet veranderen.
- Stress test is een goed mechanisme om te kijken hoe we problemen samen kunnen aanpakken. De principes zouden we hierbij als referentie kunnen gebruiken.
- Deze case is niet representatief voor heel de lokale schaal, maar maatwerk is juist nodig om kennis op te doen over de principes. Met de principes zitten we nog in een leerproces, dit gebied is nog volop in ontwikkeling.
- Deze leerervaringen moeten we met elkaar delen.
- We moeten nadenken over hoe de principes zich aanpassen aan een schaalniveau. Misschien kun je ze als waterschapper beter in je achterzak houden om te gebruiken als structuur voor het gesprek met gemeenten.
- Hoe moeten we de principes gebruiken? Wel toepasbaar, maar hoe?
- Er is concretisering nodig, dit doen we door voorbeelden/cases te verzamelen. Misschien werken de principes op een bepaalde manier wel voor Nederland, maar niet voor Duitsland bijvoorbeeld.
- Welwillendheid is nodig om de principes te laten werken. Waar vind je die welwillendheid, alleen bij water professionals?
- Er is nog geen standaardmethode aanwezig om de principes te laten werken → zoeken naar meer concretisering is nodig? Als je teveel concretiseert kun je het wiel dan nog wel op alle schaalniveaus toepassen?
- Meer transparantie komt er wel aan door de nieuwe omgevingswet
- Waterschap Rivierenland is zelf al goed bezig om breder te kijken en een andere manier van werken te implementeren.
- De naam van de waterschappen is erg verbeterd de laatste jaren.
- Innovative governance is één van de principes: project focusgebied Linge is op zichzelf een voorbeeld van het principe innovative governance.
- Een format als de OECD Principles on Water Governance (de gedachte hierachter) zou je waarschijnlijk ook wel kunnen toepassen op andere vakgebieden. Maar dit specifieke wiel is geboren vanuit een watervraagstuk omdat water door de OECD wordt gezien als basis voor

welvaart. Op het gebied van bodem (nodig voor voedsel) zou ook zoiets gebruikt kunnen worden. Kom je dan tot dezelfde principes?

- OECD wil zelf ook graag concretisering.
- Het laten landen op mondiaal niveau van de principes is lastig, in de uitwerking van de Sustainable Development Goals krijgen de OECD principes maar een kleine rol.
- Zoeken in bruikbaarheid in de praktijk
- Het is een compleet bouwwerk
- Sommige principes zijn misschien niet van toepassing op een bepaalde schaal of in een land. Dit is in principe geen probleem, want omdat deze wel in het wiel zitten wordt je gedwongen hierop toch alert te zijn, er even wat aandacht aan te besteden.
- Stakeholder engagement principe is iets wat zich aan het ontwikkelen is lastig om hier de perfecte manier voor te vinden.
- Er zijn nauwelijks standaard methoden om te evalueren. → kost tijd.
- Waterschappen komen vanuit de techniek, governance jezelf dan eigen maken kost gewoon tijd.
- Wel is het belangrijk om de kerntaken van de waterschappen niet uit het oog te verliezen, techniek blijft de ruggengraat van de organisatie.
- Vraagstukken over water governance komen wel steeds meer naar voren, maar niet expliciet via de principes.
- Er is een gat in de doorstroming van wetenschappelijke kennis naar de praktijk. Voor de OECD principes worden daarom good practices en de indicatoren gebruikt om de OECD principes dichterbij de praktijk te brengen. Stakeholders moeten vanaf het begin af waan worden meegenomen. Dat moet de wetenschap doen. Eigenaarschap creëren.

## Appendix F Visit 9th Meeting on Water Governance OECD, Paris

### Agenda of the 9th Meeting on Water Governance

Monday 3 July 2017 OECD Conference Centre – Room CC12	
08:30 - 9:00	Registration & coffee networking
9:00 – 9:15	Welcoming Remarks by M. Peter Glas, Chair of OECD-WGI
9:15 – 10:15	<b>Global Water Agenda</b> Delegates will discuss how the WGI can contribute to recent international water developments. Short introductions from the lead institutions (5-6 min each) will set the scene for group discussion. <ul style="list-style-type: none"><li>• Progress on the monitoring of SDG 6 [Water and Sanitation for all], UN-Water &amp; WHO</li><li>• Follow-up to COP21 &amp; COP22 Outcomes, INBO</li><li>• Preparatory process of the 8<sup>th</sup> World Water Forum (March 2018, Brasilia), WWC &amp; ANA</li><li>• Group discussion</li></ul>
10:15 – 10:45	Coffee Break
10:45 – 12:45	<b>OECD Water Governance Indicators</b> Delegates will discuss the revised indicator framework proposed as a tool for dialogue to support the implementation of the <i>OECD Principles on Water Governance</i> , building on comments received at the 8 <sup>th</sup> WGI meeting (January) and lessons learned from the 12 pilot-tests (May). <ul style="list-style-type: none"><li>• Presentation of the revised indicator framework, OECD (20 min)</li><li>• Highlights from selected pilot-testers (20 min)</li><li>• Group discussion &amp; next steps (1h)</li><li>• Remarks by Working Group coordinators &amp; next steps (20 min)</li></ul>
12:45 – 14:15	Buffet Lunch (Atrium area)
14:15 – 15:30	<b>Sharing knowledge on water governance reforms, events and research</b> <ul style="list-style-type: none"><li>• Revitalising IWRM for the 2030 Agenda<ul style="list-style-type: none"><li>– Key messages by the World Water Council IWRM Taskforce (5 min)</li><li>– Group discussion and feedback on the supporting document (15 min)</li></ul></li><li>• Key water governance messages from (5 min each):<ul style="list-style-type: none"><li>– Recent research:<ul style="list-style-type: none"><li>▪ Multi-level governance as institutional layers: revisiting water services regulation, Paris Univ.</li><li>▪ Manual on water governance in humanitarian contexts, ACF</li><li>▪ Governance of water infrastructure in Chile, OECD</li></ul></li><li>– Latest events:<ul style="list-style-type: none"><li>▪ 4<sup>th</sup> Istanbul International Water Forum, Turkish Water Institute</li><li>▪ Water Economics Forum, IMDEA</li><li>▪ XVI World Water Congress, IWRA</li><li>▪ 3<sup>rd</sup> Asia-Pacific Water Summit, NARBO</li></ul></li><li>– On-going projects and policy developments<ul style="list-style-type: none"><li>▪ Recent developments in water governance and regulation in Israel, Ministry of Economy of Israel</li><li>▪ Contributing to policy coherence through groundwater governance, IUCN</li><li>▪ Governance and financing in MENA water sector, GWP-Med</li></ul></li></ul></li><li>• Group discussion (10 min)</li></ul>
15:30 – 16:00	Coffee break



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16:00 - 18:00

**Water Governance in France**

The session will discuss the policy implications of recent territorial and environmental reforms in France on the governance of water resources and services, and invite delegates to share their good practices.

- **Scene Setting:** Pierre-Alain Roche, Ministry of Environmental & Inclusive Transition, France (15 min)
- **Panel 1:** Fostering policy coherence at the appropriate scale for water resources management (45 min)
  - François Mitteault, Ministry for Ecological and Inclusive Transition
  - Catherine Gremillet, French association of EPTB
  - Bernard Rousseau, National Water Council
  - Didier Marteau, French Agricultural Councils
  - Thierry Burlot, Bretagne Region
- Q&A (15 min)
- **Panel 2:** Addressing territorial fragmentation and implications of recent reforms for water services (40 min)
  - Philippe Marest, Nantes-Métropole
  - Maximilien Pellegrini, Suez
  - Michel Desmars, FNCCR
  - Adrien Tchang-Minh, CLCV
- Discussant: Bernard Barraqué, CNRS (5 min)
- Q&A & conclusion (25 min)

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18:00 - 19:30

Cocktail (Room Georges Marshall)

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### Pictures of the 9th Meeting on Water Governance

