

# Towards an integrated water management - Comparing German and Dutch water law from a spatial planning perspective

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Water management increasingly deals with spatial aspects; spatial planning interferes and depends in various ways on water management. Particularly in urban areas, this interference calls for an integrated water management. As a result, water management and spatial planning meet. Laws frame the interaction of the two institutions. In this contribution, Dutch and German water law are compared in terms of the governance for water management they nurture and sustain. A conceptual framework by Driessen et al. is applied, which incorporates analysing three characteristics of governance: the actor relations, the institutional context, and the approaches to the governance object – water – itself (Driessen et al., 2012). Finally this contribution aims to reveal the relation between modes of governance and the law, and it makes a claim for governance research: law matters.

**Keywords:** *Modes of governance, water law, Germany, The Netherlands*

## 1. Introduction

Land and water management in urban regions are increasingly challenged due to recent and on-going socio-economic and environmental changes (Gilissen, van Rijswijk, & van Schoot, 2009; Wiering & Immink, 2006, p. 423). Issues of the common management of land and water become more important in central Europe. Frontiers of spatial planning and water management emerge, and modes of governance are needed that can face up to the challenges at hand. A few examples shall illustrate why this is relevant: coastal regions and delta areas are often intensively used areas with major cities; climate change will lead to sea-level rise, which calls for adaptive and resilient spatial planning and water management solutions. Cities along rivers prepare for higher and more frequent floods due to climate change on the one hand (Edelenbos, Bressers, & Scholten, 2013) and due to increasing vulnerabilities because of intensified land use on the other hand (Hartmann, 2011). Groundwater resources are influenced by land uses (Perry, Miller, & Brooks, 2001) and vice versa. As the uses of land

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and water intensify, the interrelations increase. Freshwater and sewage management are, for example, affected by demographic changes such as shrinkage on the one hand and urbanization on the other hand. Water management thus crucially depends on the success or failure of spatial development policies. Surface water bodies are used for multiple purposes in urban regions – cooling, drinking, recreation, etc. Water quality is a crucial issue for the welfare of such regions. Increasing needs and demands in growing and more intensively used cities threaten water quality in developed countries. Accordingly, one doesn't necessarily need to refer to the “water stress” in developing countries (Palaniappan, Lee, & Samulon, 2006) or water conflicts in the Middle East (Lanz, Muller, Rentsch, & Schwarzenbach, 2006).

Viable solutions to such major challenges call for the common management of land and water. But land and water are usually not commonly managed; rather, institutions are fragmented, and interactions are complex (Edelenbos et al., 2013, p. 3; Moss & Monstadt, 2008). In this paper, we focus on the integration of spatial planning and water management. The academic discussion on connecting and integrating sectors and subsectors in the field of water management (Wiering & Immink, 2006; Dyckman & Paulsen, 2012) remains somewhat vague when it comes to the question what integrated water resource management (IWRM) exactly means (Asit, 2004). A call to integrate other disciplines has been issued (Loucks, 2000); others promote an integration of ‘natural systems’ (water and land) in the ‘human systems’, involving economy, policy, institutions, and others (Jøneh-Clausen & Fugl, 2001). Calder notes in his book *Blue Revolution* that the “revolution in the way land and water are managed is changing the way society regards water” (Calder, 2005, p. 1). He acknowledges the need to invent governance schemes to deal with this revolution.

Governance is often considered as an opposite of government (Wegener, 2012; Rydin, 2010; Kohler-Koch, 1999), namely a counter-position to implementation policy solely brought about by centralized governments (Klůvankova-Oravska, 2010) or the public sector (Driessen et al., 2012). Modes of governance describe how public and/or private actors collaborate in order to realize collective goals (Benz, 2005). In a broader sense, “governance implies the involvement of various actors that are independent of a central power and operate at different levels of decision-making” (Klůvankova-Oravska, 2010). According to this understanding of governance, also the collaboration of water management and spatial planning on integrated water management can be regarded and analyzed as governance processes, although both are public actors. Namely, collaboration between public actors – such as spatial planning and water management – is not merely a question of top-down steering, rather there are many similarities in the way different public actors interact with how public and private actors interact. Therefore, this contribution applies a conceptual model of governance in order to analyze the relation between water management and spatial planning to a better integration.

Most debates on integrated water management barely address law and legal implications for governance, but instead they tend to focus on concepts such as collaborative or communicative approaches (Healey, 1996; Gunder & Hillier, 2009) or regards networks and evolutionary approaches as the solution to governance challenges. Often the law is regarded merely as a constraint or even an obstacle for governance (Hartmann & Needham,

2012a; Hartmann & Needham, 2012b). Although there is also a debate on legal integration of water issues, to create more comprehensive water laws (Gilissen et al., 2009; Jong, 2007; De Heer et al., 2004), the discussions on governance and legal issues are barely interconnected.

However, in many policy fields, policy is more and more often not implemented solely by one governmental actor, notably in the emerging governance arena of land and water management (Hartmann & Spit, 2014). So, the definition of governance above is widened: Governance refers to the implementation of public policy where different public or private actors are involved in the decision-making. This fits within the general understanding of governance by the European Commission: “Governance means rules, processes and behaviour that affect the way in which powers are exercised” (European Commission, 2001). As a consequence, the herein pursued approach starts the analysis of governance from a legal perspective: how do spatial planning and water management each cope with this governance arena? These questions are discussed in this contribution from the side of water management, and, in particular, through the lens of water law. The basic assumption is that the law has a particular and often marginalized or neglected impact on the mode of governance. The central question of the paper is how law nurtures and sustains certain modes of governance. The general assumption is that the law creates a legal environment in which modes of governance develop. It will be shown how different laws sustain certain modes of governance.

The scholarly debate around governance agrees that there are different and distinguishable modes of governance. A systematic and generally acknowledged conceptual framework for describing and distinguishing those modes is missing (Klůvanková-Oravská, 2010). Driessen et al. (2012) point out that “a conceptual framework distinguishing modes of governance is essential for the measurement of variation” (Driessen et al., p. 3). Whereas they focus on a comparison over time, this contribution emphasizes variation across various legal contexts rather than over time. But the conceptual framework can be applied as well. Driessen et al. distinguished five modes of governance (centralized, de-centralized, public-private, interactive and self-governance). These categories describe the roles of and relations between the state, the market, and civil society (Driessen et al., 2012). However, since this contribution focuses on the collaboration of two state actors, the five modes of governance as identified by Driessen et al. itself will not be applied here. Instead, the analytical framework that led to those five types will be applied. The conceptual framework of Driessen et al. incorporates an analysis of the three characteristics of governance: the actor relations, the institutional context, and the approaches to the governance object – water – itself (Driessen et al., 2012). Those three categories have been proven useful earlier in regard to not only analyzing governance but also policy processes (Bertolini & Spit, 1998; Spit & Zoete, 2009). Hence the conceptual framework provides a viable but also comprehensive analytical scheme to compare the modes of governance in two different countries. Those three categories are applied in the following way: the actor relations refer to the way the water laws determine the interaction and integration of water management and spatial planning as independent actors. In the analysis of the institutional context it is explored

what types of laws the two water laws are and how this interacts with the integration of water management and spatial planning. In the third category, it is looked at the way the water laws frame the object of governance: water itself.

Why does this matter? This analysis how the law affects modes of governance requires special attention for several reasons. First of all, it is, of course, relevant for the academic debate on modes of governance, because the legal perspective provides an understanding how institutions that are embedded in a certain legal tradition and context react to particular governance approaches. But second, it also has practical implications. Particularly in Europe, land and water governance are increasingly influenced by supranational regulations (notably European Directives, but also other international conventions). Those supranational regulations have an impact on national laws and thus – if law and governance are interrelated in the assumed way – change the ways and patterns in which institutions behave (i.e., their mode of governance). A third reason why this matters is that this analysis helps to understand the opportunities and constraints for international collaborations (i.e., in transboundary river basins such as the Rhine). The legal entrenchment of modes of governance constrains institutions' transboundary interactions (in this case between Germany and the Netherlands).

Therefore, two water laws – the German and the Dutch – are analysed in terms of the mode of governance they nurture for the common management of land and water issues. In this contribution, special attention is given to the water-side of the governance arena. So, the focus lies on the question how water law prepares for spatial water planning (how it prescribes integration of planning aspects).<sup>1</sup>

This question is broken down to three key assumptions:

- The legally determined responsibilities and decision structures crucially constrain the relation between actors;
- Certain types of regulation (i.e., the legal context) nurture particular administrative styles in terms of the level of discretion afforded the executive estate;
- The way the law is set up determines how the object of governance is approached (i.e., integrated or sectoral).

So, the law is thus a key systemic variable for the emergence and robustness of certain modes of governance; which insight also helps to understand the entrenchment of modes of governance of (governmental) institutions (see also Hartmann & Needham, 2012).

One might argue that the intersection of land and water does not create a new governance arena, but can be assigned to an existing policy field. However, a policy field suggests that a given political structure (polity) has various alternative paths (politics), which result in a certain policy (Schubert, 1989, p. 23). The new governance arena, however, is the overlapping field of two separate and different political structures – water management and spatial planning, each pursuing its own mode of governance.

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<sup>1</sup> A more detailed analysis of the planning-side is conducted in Hartmann & Spit, 2012; Hartmann & Driessen, 2013; and Hartmann & Spit, 2014.

Spatial planning is considered here as the governmental interventions of institutions that influence the allocation and distribution of land use (Davy, 2005). This covers municipal land-use planning (zoning), town planning, urban design, and regional planning. Water management encompasses different aspects of water systems, most importantly flooding and water scarcity, water quality, water supply and sewage management, and societal functions of water systems for surface water bodies, coastal water bodies and groundwater bodies (German Wasserhaushaltsgesetz, WHG and Dutch Waterwet). As the use of water and land intensifies, these aspects become increasingly intertwined with each other and with other policy fields.

A mode of governance is understood as a particular arrangement of actors, institutions, and approaches to the object (Driessen et al., 2012). Driessen et al. developed a conceptual framework for the analysis of modes of governance<sup>2</sup>: They suggest analysing actor relations, institutional context, and approaches to the object of a mode of governance. The actor relations describe the process relation that frames issues. This is an indicator for the involvement and integration of stakeholders and other parties. The institutional context describes the setting in which interactions between the actors take place. Here, particular ways of regulating an issue reveal the rules of interactions. The approach to the object addresses the perspective on the governance object – is it for example divided into separate subfields or regarded as a comprehensive system (Driessen et al., 2012). Driessen et al. use this framework to describe changes in modes of governance over time. One of the conclusions is that further research on the analysis of drivers and constraints to changes in modes of governance are necessary (Driessen et al., 2012). This present contribution can be understood as such an analysis. The key assumption is that law is such a constraint. However, in the analyses by Driessen et al., law plays a minor role, but in fact law sets the rules for the interaction of actors (processes), sets the institutional context in which governance takes place, and it sustains a certain approach to the governance object itself. How do German and Dutch water law respectively nurture the spatial water governance?

To answer this question, the most recent water laws have been compared using the conceptual framework by Driessen et al. (2012). Therefore, the texts of the law, policy documents, and relevant literature have been analysed.

## 2. German and Dutch water law

Germany and the Netherlands share catchments – notably the Rhine – but their water laws are very different, in particular with respect to the integration of water management and spatial planning. The two countries represent two different approaches, as shall be outlined below.

In addition, it is an interesting comparison, because both countries enacted new water laws in 2010 with similar intentions from the legislators. The Dutch ‘*Waterwet*’

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<sup>2</sup> In their study, Driessen et al. also distinguish five particular types of modes of governance that are compared according to the three categories.

and the German ‘*Wasserhaushaltsgesetz*’ both came into force in 2010. The new Dutch Government consolidated eight individual water-related laws into one water act, aiming for more comprehensive water management and improving the relation between water policy and spatial planning (Helpdesk Water, 2012). The German Federal Water Act underwent a major reform in 2010, too. It implemented European legislation but also strengthened and improved the law (Deutscher, 2009). Hence, both laws aim for a more comprehensive and integrated water law. Before, the water laws have been criticized as being too complex, fragmented, and incomprehensive (Schneider, 2005; Moss & Monstadt, 2008; van Steen & Pellenbarg, 2004, p. 594; Lenschow, 1999). The two reforms of the laws shall be briefly introduced below:

Germany is a federal state. Before the reform of federalism in 2006, the competency of the central Government was restricted to ‘framing legislation’ (‘*Rahmengesetzgebung*’). Framing regulation is a particular type of legislation where the federation releases only general (framing) regulations and leaves the final elaboration on the details to the state governments. Framing legislation often leads to disputes between the state governments (‘*Länder*’) and the central government. The reform of federalism made the attempt for a more comprehensive and consistent water law possible (Deutscher, 2009, p. 1). Previous important revisions were as follows:

- the reform of the Federal Water Act in 1996, a major reform of the German water law in 2002, which predominantly implemented the European Water Framework Directive,
- the Federal Flood Control Act in 2005,
- the major revision of the Federal Water Act in 2009 (which came into force in 2010), implementing the European Flood Risk Management Directive 2007/60/EC (Hartmann, 2012).

In fact, the recent reform of German water law is also a result of a failed attempt of the government to release a comprehensive environmental law, the ‘*Umweltgesetzbuch*’. After years of discussion, the German government finally failed, and European legislation exerted pressure that they frame at least a reformed water law that implements the European Flood Risk Management Directive (Knopp, 2010).

In 2009, the Dutch Government decided to revise Dutch water law; the major aims of this revision were the implementation of a river-basin approach, a clear distribution of responsibilities between different governmental levels and agencies, and implementation-oriented instruments (Tweede Kamer der Staten-Generaal, 2006, p. 3). Like the German water law, the new water law was adopted in 2009 and came into force in 2010 (Gogh & Handgraaf, 2010). It integrates eight laws on water issues (Dutch Ministry of Transport, Public Works and Water Management, 2010):

- the Water Management Act (‘*wet op de waterhuishouding*’),
- the Flood Defences Act (‘*wet op de waterkering*’),
- the Groundwater Act (‘*grondwaterwet*’),
- the Surface Waters Pollution Act (‘*wet verontreiniging oppervlaktewateren*’),



- the Marine Waters Pollution Act (*‘wet verontreiniging zeeewater’*),
- the Act of 14 July 1904 containing provisions on land reclamation and construction of dikes,
- the Public Works Management Act (sections relating to waterways) (*‘wet beheer rijkswaterstaatswerken’*), and
- the Public Works Act 1900 (sections relating to waterways) (*‘Waterstaatwet 1900’*).

Finally, also the law on shipwrecks (*‘wrakkenwet’*) has been integrated (Gilissen et al., 2009, p. 11). This comprehensive revision of Dutch water law strengthened the water instruments and provided a more consistent law. Before, Dutch water law had consisted of separate rules for every water management task (much like in German water law) (De Heer et al., 2004, p. 11).

How do these two new water laws frame the mode of governance in water management in the two countries? The following sections address these three aspects of modes of governance by analysing the two water laws. The first section addresses actor relations; the next section analyses the institutional context; the third of the following sections describes the different approaches to the governance object itself. Thereby, the underlying rationale of the law is going to be uncovered.

### 3. Actor relations

Water issues relate to many different stakeholders from various sectors. The law determines responsibilities, decision structures, and relation between public and private actors. How do German and Dutch water law integrate actors from outside the field of water management?

#### 3.1. The German Federal Water Act (WHG): contending integration

In Germany, strong division of responsibilities between sectoral planning and spatial planning is an inherent feature of the administrative system (Moss, 2004, p. 86). In fact, the relation between water management and spatial planning on various levels is well rehearsed but conflicting (Moss, 2009, p. 54). This is even founded in the constitutional law (*‘Grundgesetz’*): article 28 GG (local self-government) and article 20 GG (rule of law and precept of democracy) are the constitutional basis for this relationship (Stüer, 2005, p. 2995). Accordingly, spatial planning is metadisciplinary and superordinary while water right is sectoral (Stüer, 2004, p. 416). In cases of conflict, sectoral planning may insist on its competences, but land use planning aspects must be considered in the sectoral planning decisions (Stüer, 2005, p. 2990–2995).

However, there are a few links between water management and spatial planning. One link is the special plan approval (*‘Planfeststellungsverfahren’*) necessary for river construction works. Section 68 of the WHG determines that technical constructions that substantially change, remove, or construct water bodies require such a special plan approval.

These constructions are predominantly dikes and dams but also the creation of artificial lakes. The law determines the conditions under which such projects need to be approved – they may not negatively affect the public interest; in particular, they may not increase the flood risk or destroy retention or alluvial forests (section 68 WHG). The precise procedure of a special plan approval is regulated in the administrative law (*‘Verwaltungsverfahrgesetz’*). The procedure precisely determines the involvement of stakeholders and public participation. There is thus a contending relation between various sectoral planning and between water management and spatial planning. The way the German water law frames actor relations is thus less suitable for an integrated approach to water management.

### 3.2. *The Dutch Waterwet: strong integration with spatial planning*

Since the 1980ies, the Dutch have pursued an integrated water management approach (Tweede Kamer der Staten-Generaal, 2006, p. 3). In 2006, The Dutch Government recognized the increasing influence of water-related issues on spatial planning (Tweede Kamer der Staten-Generaal, 2006, p. 5). The Dutch government recently merged the ministry responsible for spatial planning with the water ministry. It was the legislator’s intention to create a water law that better integrates spatial planning and water management with each other; this in particular encompasses an improved connection with other policy fields, such as spatial planning, on all spatial levels (Tweede Kamer der Staten-Generaal, 2006, p. 3).

An important element of this integration is that, since the recent reform, water management plans are formally equitable with a *‘structuurvisie’* (structural programme) according to the spatial planning act (Wro). This is regarded as one of the most important innovation in Dutch water law (Tweede Kamer der Staten-Generaal, 2007, p. 99). This requires that water management plans consider all spatial aspects of the plans, and all relevant stakeholders need to be formally involved; as a consequence, the realization of water issues via spatial planning is improved (Gogh & Handgraaf, 2010, p. 81). Thus, in using similar plan types as in spatial planning, water management improves the integration of water issues with spatial planning (Gilissen et al., 2009, p. 42, 58).

Another important element of Dutch water law is the water assessment. It is an obligatory procedure for spatial planning decisions integrated in the spatial planning decree *‘besluit ruimtelijke ordening’* (Bro); it warrants that spatial planners take water issues into account in the decision making process when, for example, approving spatial projects or deciding on land-use plans (Gilissen et al., 2009, p. 7). The water assessment creates a strong relation between water management and spatial planning: every plan needs to contain a section on water issues (Gilissen et al., 2009, p. 126). The water assessment is an important instrument of integrated water management in the Netherlands.

Water boards are the competent authorities for regional water issues (De Heer et al., 2004). These are local authorities that have evolved as bottom-up initiatives since the 13th century and are responsible for water control, water quantity, and water quality issues as well as the management of infrastructure (van Steen & Pellenbarg, 2004). Representatives of households and industry are involved in the water boards (De Heer et al., 2004, p. 10); such a construction exists in Germany only exceptionally and only in North Rhine-Westphalia,



as for example for the Emschergenossenschaft and Lippeverband. Waterboards are the administrative bodies authorized to grant water permits according to section 6.1 Waterwet – a task that is considered essential to the German government. So, water boards are strong sectoral institutions and although Dutch water law provides various aspects of integrated water management, it may not be underestimated that the Dutch have quite a long tradition of strong water authorities. The Dutch Directorate-General ‘Rijkswaterstaat’ is the most important and central institution for water management in the Netherlands; it has a long-lasting tradition, and it centrally governs and initiates all water-related issues with “hegemony of the state” (Wiering & Crabbé, 2006, p. 99). In addition, the nation-wide Delta Programme plays an important role (in particular for flood risk management); it brings together various water institutions and municipalities (Eerd, Wiering, & Dieperink, 2014).

The strength of Dutch water management does not necessarily diminish interplay with other institutions. This seems to contradict the assumption that strong sector authorities lead to weak interplay with other authorities (Moss, 2007). One of the reasons that the combination of strong authorities and integration of water management is not per se a contradiction in the Netherlands can be seen in the Dutch Poldermodel (Schreuder, 2001). However, the Netherlands is a relatively small country that belongs, to the large extent, to the same catchment unit. On top of that, the origin of spatial planning in the Netherlands lies in the field of water management (van Cammen & de Klerk, 2012). Recently, spatial planning and water management have been merged into the same ministry. So, the tension between fit and interplay is less intense in the Netherlands from its geographical conditions and cultural tradition. So, although the water boards and also Rijkswaterstaat are quite strong sectoral institutions, their set up (bottom-up and democratically elected water boards) and working paradigm (Poldermodel) sustains a relatively good integration of water management and spatial planning.

#### **4. Institutional context**

The institutional context can differ in the scope of discretion of the executive estate and the way in which regulations are set up. Regulations in codified law systems such as in the Netherlands and Germany in generally aim to regulate cases beforehand, abstractly, comprehensively, and exclusively (Fonk, 2010, p. 626). They prescribe what is allowed and forbidden in certain situations. There are two different ways of doing this: the legislator could regulate either the actions of the subjects or the results of actions. The first route is condition-based regulation, describing precisely what actions the addressed entities have to take under what conditions and in what situations; the second route is performance-based regulation<sup>3</sup>.

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<sup>3</sup> The term “performance-based” is derived from the US-American discussion of the topic (Coglianese et al., 2002; Hartmann & Spit, 2012; in the German discussion, the word ‘finale Gesetzgebung’ is used – but there are hardly any suitable literal English-language translations); it incorporates ‘the regulation’s aim into the language of the rule’ (Coglianese et al., 2002:706). Performance-based and condition-based do not match the goal- vs. mean-oriented distinction. This represents another category that originates in environmental legislation (see Albrecht, 2007; Hartmann & Albrecht, 2014).

Performance-based regulations differ from condition-based regulations in the way they govern: either by describing precisely what actions the addressed entities have to take under what conditions and in what situations (condition-based) or by incorporating the regulation's aim into the language of the rule and leaving discretion to the administration (performance based) (Hartmann & Spit, 2012; Durner & Ludwig, 2008; Albrecht, 2007). Performance-based regulations focus on the result of an executive activity; the purpose or aim of a regulation is determined, and it is left to the executive estate how those aims are to be met. So this type of regulations requires a much more self-contained administration than condition-based regulations (Breuer, 2000, p. 89). Condition-based regulations do not determine explicitly (or at least it is not the predominant principle) the aim of a regulation, but rather they prescribe the conditions under which a certain legal consequence is to be applied by the administration (Fonk, 2010, p. 629).

This distinction is for the case of comparing the German and the Dutch water law of major relevance, as the systems – and thus the mode of governance – differ in these two ways of regulation.

#### *4.1. The German WHG: condition-based vs. performance-based*

For most sub-fields of water management, German law pursues condition-based regulations, emphasizing procedures of administration (Coglianese, Nash, & Olmstead 2002; Fonk, 2010, p. 629). For example, German water law determines that the use of water requires specific permissions or authorizations. The law then contains a concluding list of activities defining what is understood as 'use'. In addition, the procedures and conditions under which an authority may grant permission or authorization are prescribed in great detail (section 8-24 WHG). The degree of discretion, water management agencies are allowed is therefore quite low (Knopp, 2010, p. 24). Traditionally, German water law regulated the facts of a case comprehensively and abstractly (Albrecht, 2007, p. 98; Breuer, 2007). Consequently, the administration is not used to a rather free and broad scope of decision-making. This means that water management tends to be an administration that adheres to the if-then conditions, albeit with discretion. Water managers are used to acting within the system of the law and expect the law to determine in detail what to do and when.

However, the introduction of European directives – in particular the Water Framework Directive and the Flood Risk Management Directive – led to a shift. European directives in general tend to pursue environmental policy by performance-based regulations (Durner & Ludwig, 2008, p. 460). The Water Framework Directive was the first that introduced performance-based regulations in German water law. The definition of a goal for water quality contradicts the previous regulations on water quality in Germany. These focused on thresholds for individual emission sources along a water body, which is a characteristic of condition-based regulations. German administrations fear that setting a maximum level of pollution in a river weakens the precautionary principle instead of regulating individual pollution sources (Albrecht, 2007). Therefore, in Germany the introduction of the European plans for flood risk management and water quality mark a shift in the

institutional context determined by the law (Breuer, 2000). It emphasizes balancing and well-elaborated ‘rational’ decisions that are consistent within the system of programs and plans (Breuer, 2007, p. 505). The reason why German water administration in particular is likely to struggle with this is that other systems, such as the French or British administrative law already follow this performance-based tradition, but German water administration is traditionally more condition-based. Hence, in Germany, tension exists between the regulatory approach and the administration (Breuer, 2000).

In addition, German planning law has a strong tendency towards performance-based legislation. This tendency can be seen, for example, in article 1 of the German Building Code, where the (performance-based) aims of municipal land-use planning are determined (see also Fonk, 2010, p. 628). German planning law is even seen as the prototype of performance-based legislation in Germany (Albrecht, 2007; Fonk, 2010).

#### 4.2. *The Dutch Waterwet: more performance-based*

Traditionally, water management in the Netherlands relies on technical expertise and hydraulic engineering (van den Brink, 2009; Wiering & Immink, 2006, p. 423), but at the same time, the discussion about water management behind the dykes is conducted more pragmatically in terms of the coordination between environmental policy and spatial planning (Glasbergen & Driessen, 2002). Besides the written formal rules, the Netherlands, namely, have a tradition of unwritten law: the “rules of responsible public administration” (Needham, 2006, p. 144) or “principles of good governance” (Taekema, de Roo & Elion-Valter, 2011, p. 26). Although they are not formally determined in the law, courts recognize them as an accepted codex for governmental activities (Needham, 2007). Therefore, they have considerable impact at the local level. Such rules include that an agency should honour earlier promises, make decisions carefully, and consider all relevant facts (Taekema et al., 2011, p. 26).

The Dutch Water Act also contains condition-based regulations, for example, for the use of water. The water permit or authorization regulates who may use water and how it may be used, but Dutch water management agencies have a much wider scope of discretion for the decision of appropriate measures to prevent misuse, pollution or other undesirable actions (see section 6.8-6.9 Waterwet) than German authorities. The construction and maintenance of water management structures (section 5 Waterwet) is regulated in relatively great detail. Like in Germany, projects that construct, reallocate, or reinforce flood defence structures (the Dutch law explicitly refers to flooding; German water law uses a broader definition of constructions that need approval) require a specific project approval. Its procedure is laid down in the administrative law (section 5.5 Waterwet). However, overall, Dutch water law is much less condition-based, water management agencies have more degree of discretion, and Dutch water law contains less procedural but more performance-based regulations than the German WHG.

The Dutch spatial planning act (Wro) has a tendency towards condition-based regulations; although this assignment is less clear than the assignment of German planning law

to performance-based regulations. Accordingly the tension in the modes of regulations between Dutch planning law and water law is weaker than in Germany. In the Netherlands, the tension between water management and spatial planning is also reduced by two recent developments. First of all, since 2010 (but beginning with the reform of the planning act in 2008), the role of (national and provincial) spatial planning in the Netherlands has been substantially weakened (Waterhout, Othengrafen, & Sykes, 2013). The other development is the new law on the Environment ('Omgevingswet') that is currently under consideration in the legislative procedure.

## 5. Approaches to the object

How do the two laws regard water? How comprehensively or how sectorally are subjects regulated in the Netherlands and in Germany?

### 5.1. *The German WHG: sectoral approach to water issues*

The German Federal Water Act is subdivided into chapters and sections. The chapters are on general aspects, the management of water bodies, specific rules for the management, financial matters, responsibilities and miscellaneous regulations. Within this structure, German water law distinguishes the following subsectors of water management: surface water bodies, coastal water bodies, groundwater bodies, water supply, sewage water management, hazardous substances, dams and dike constructions, and flooding. Accordingly, German water law determines the management goals for surface water bodies (sections 25–42 WHG), coastal water bodies (sections 43–45 WHG), and for groundwater bodies (sections 46–49 WHG) separately.

Whereas Dutch water law prescribes comprehensive water management covering plans with all aspects considered, German water law distinguishes different plans for different subjects: the flood risk management plan (section 75 WHG), the programme of measures (section 82 WHG), the river basin management plan (section 83 WHG). Those plans result from the European Water Framework Directive (2000/60/EC) and European Flood Risk Management Directive (2007/60/EC). Hence German water law has known plans on water quality since 2002 and different plans on flooding. No overall water management plan exists. The text of the two European directives prescribing the plans has been translated almost literally and placed in the German Federal Water Act. European water policy promotes a river basin-wide planning approach (Dworak & Görlach, 2005, p. 98). The European Water Framework Directive demanded covering whole river basin districts to achieve a 'good [ecological] status' for bodies of water (2000/60/EC). However, this directive did not explicitly address flood protection or flood risk management (Dworak & Görlach, 2005, p. 98). The Flood Risk Management Plan fills this gap. These plans shall determine objectives and measures to reduce the negative consequences of flooding, coordinated at "the level of the river basin district" (section 75V WHG). The flood risk management plan has a predecessor: in 2005 the German legislator introduced

the Flood Control Plans ('Hochwasserschutzpläne'). Previously, the Saxon Water Act (SächsWG) had already contained similar plans since 2004 in section 99a SächsWG: 'Hochwasserschutz-Aktionsplan' (flood control action plan) and section 99b SächsWG: 'Hochwasserschutzkonzepte' (flood control concepts).

The strong emphasis on the spatial river basin approach to flood risk management is new in the law. But the link between the flood risk management plan and the two instruments for water quality is rather vague; the plans appear a bit alienated and not well integrated into the overall German water law (Louka, 2008, p. 24). For instance, the flood risk management plan does not demand incorporating inundation zones (section 76 WHG) in the plans. Also, the law does not actually demand that dams and dikes are to be included in the flood risk management plans. The German WHG does not explicitly connect the plan approval of such projects to plans (such as the flood risk management plan or the river basin management plan). Thus such projects are not directly bound to such plans.

Finally, German water law pursues a sectoral approach to water issues. Water is subdivided into subfields (water quality, flood protection, etc.); these subfields are subdivided again (e.g., technical flood protection, inundation zones, risk management, etc.). This can be regarded as a fragmented approach – as opposed to a comprehensive governance of water issues, as shall be seen below in the case of Dutch water law.

## 5.2. *The Dutch Waterwet: comprehensive approach to water*

The Dutch Waterwet is also subdivided into sections: the first encompasses general issues such as definitions, the second defines the aims and technical norms, the third clarifies the organization of water management. The next sections cover plans with a subsection on the Deltaprogramme first, another section on the construction projects follows, and third comes a section on regulations on activities that need approval. Finally, sections on financial matters and responsibilities follow. It is remarkable that the structure of the Dutch water law is oriented along types of instruments – not subjects. Dutch water management is increasingly shifting from an object-oriented to a function-oriented approach (Tweede Kamer der Staten-Generaal, 2006, p. 3). Dutch water law aims for a comprehensive management of all different aspects of water systems: inundations, pollution, water scarcity, the improvement of the chemical and ecological quality of water bodies, and the achievement of societal functions of water systems (section 2.1. Waterwet).

The Dutch water law prescribes a nested system of comprehensive water plans – national, regional and local management plans (section 4 waterwet). Each plan covers all aspects of water management – flooding, droughts, water quality. Furthermore, in the Netherlands, many regulations derive from European directives. But in contrast to the German legislator, who implemented European water directives almost word-by-word, the Dutch decided to adopt European directives in the water law in a more integrative way, which shall make the law more robust and flexible towards future directives (Gogh & Handgraaf, 2010, p. 82). Therefore, the regulations in the Water Act focus on basic issues, whereas the details of the implementation of the directives are regulated in the water

decree (*'waterbesluit'*), which is more flexible in terms of change. Section 4.5 of the water decree determines that a national water management plan must incorporate the flood risk management plan and the river basin management plan as prescribed in the European Floods Directive and respectively in the Water Framework Directive. So, the Dutch water law pursues a water-system approach (although Dutch water management knows also a divisions between water quality on the one hand and a different approach towards flooding on the other hand). Dutch water law uses for most water issues the system units (i.e. river basins or catchments of water bodies) (Gilissen et al., 2009, p. 28) instead of topics like flooding or water quality like in Germany.

## 6. Conclusion

Law matters for modes of governance. Often, the role of law is neglected or underestimated in governance literature. This present contribution is an attempt to fill this gap. When comparing German and Dutch water law, crucial differences exist in the two approaches to integration of land and water issues. Admittedly, this analysis disregards the reasons for the differences – which might be cultural, geographical, historical, or other<sup>4</sup>. But the comparison offers an insight into *how* law matters for the analysis of modes of governance.

### 6.1. Comparison

Figure 1 summarizes the comparison of the recently reformed German and Dutch water law – the WHG and the Waterwet – in terms of actor relations, institutional context, and its approach to the object. Dutch water law prescribes a much more comprehensive and integrated water management than German water law – which is not surprising, considering the history of water management in both countries (Hartmann & Spit, 2012).

The actor relations in German water law are much more built on the idea of the distribution of power (Stüer, 2005). Issues of water management are not just integrated into spatial plans and vice versa, the relation between water management actors and others – but in particular spatial planning – is rather a permanent and contending negotiation and balancing. The institutional context in German water law is characterized by a clash of the traditional condition-based approach and the European performance-based approach. This is a particular feature of the integration of European legislation in German national law, but in water management it comes more to the forefront than, for example, in the traditionally more performance-based planning law (Hartmann & Spit, 2012). With respect to the approach to the object, the German way distinguishes the various sub-sectors of water management. Each topic is dealt with separately.

Dutch water management goes hand in hand with spatial planning. This might not be surprising for a country where urban and spatial development crucially depends on water management. Also institutionally, this relation is manifested in the water law. There

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<sup>4</sup> See, for example, van Cammen & de Klerk., 2012.



	German WHG: Disintegrated and sectoral	Dutch Waterwet: Integrated and comprehensive
Actor relations	Contenting relation between sectoral planning and spatial planning Few links between water management and spatial planning	Strong integration with spatial planning Water management plans equate with a 'structuurvisie' (spatial planning at regional level) Water assessment for spatial plans Water boards in collaboration with private parties Strong water authorities
Institutional context	Traditionally condition-based regulations European directives led to a shift towards performance-based regulations	Unwritten law of 'good governance' Less condition-based regulations
Approach to the object	Water law distinguishes subsectors No overall water management plan exists Parallel structures of different types of instruments	Water law distinguishes types of instruments A nested system of comprehensive water plans

Figure 1. Summary of features of modes of governance of German and Dutch water law

are – as seen above – some rather strong links between the two institutions. This is why the integration of water management and spatial planning needs to be assessed as quite advanced. The institutional context seems to build more on pragmatism than on strong procedures. This is, to some extent, a cultural feature of the Dutch, but also in terms of legal tradition, the more performance-based regulations provide a degree of discretion that enables Dutch water management agencies to be more flexible with procedures than German water management. The Dutch water law essentially differs from the German WHG in its approach to water: water is dealt with in a comprehensive way, covering all different aspects of water management.

Another important aspect is that the difference in the types of regulations (condition-based vs. performance-based) between the respective planning law and water law is bigger in Germany than in the Netherlands.<sup>5</sup> This has implications for the relationship between water management and spatial planning, particularly in Germany: Different types of regulations nurture different types of administration. Condition-based regulations require a type of administration that adheres to the 'if . . . , then . . . ' conditions, albeit with discretion. Such administration expects the law to determine in detail what to do and when. Performance-based regulations require a more self-determined administration that provides sound and rational lines of argument for actions and processes. Thus performance-based regulation requires a more flexible administration, willing and used to balancing issues to achieve consensus. As a result, the type of regulation chosen has a crucial impact on the mode of governance (Hartmann & Albrecht, 2014), which can cause difficulties in the collaboration of the two institutions.

<sup>5</sup> Notably, the directions of the difference is opposite in Germany and the Netherlands.

## 6.2. Discussion

What does this then mean for coping with the challenges in the water sector? In a first glance, the more integrated and comprehensive Dutch water law seems to be more suited for an interconnected and increasingly complex world. Many planning theorists would favour such an approach (Howell, 1977; Pahl-Wostl, Holtz, Kastens, & Knieper, 2010). Should Germany thus adopt the Dutch approach? What are the strengths of German water law? The more sectoral and disintegrated approach of the German water law also has advantages. Such an approach might be able to respond in a more target-oriented way to specific challenges in the respective subsectors. This might provide a more flexible approach, being able to cope much easier with lock-in situations (Hartmann & Needham, 2012b). In addition, a comprehensive water law can lead to much more complex decision structures and a complicated water law. Finland, for example, decided to withdraw the one water law they had and go back to a system of different laws for pollution, flooding, constructions, etc. In the end, it is not possible to decide which water law is better. Each approach – the comprehensive and well integrated in spatial planning Dutch approach and the (sub)sectoral and, in comparison to the Dutch, more independent German approach – has its advantages and disadvantages. In a research study on 17 EU countries (excluding Germany), the OECD confirmed that a ‘one-size-fits-all’ scheme for spatial water planning does not exist; rather home-grown and place-based policies integrating territorial specificities and concerns are required to tackle the governance challenge in the water sector (Akhmouch, 2011). Thus, the conclusion of this analysis should not be to change the water laws in Germany and the Netherlands, but to recognize and respond to the specific differences when approaching governance challenges of land and water management.

In addition, it would not be recommendable to adapt the Dutch approach of an integrated water law to countries with different geomorphology. In the Netherlands, water management is very dominant because of the important role water play in the existence of the country. In Germany, water management is merely one of many sectors and policy fields, therefore the discussion would only fuel arguments to integrate other sectors and policy fields as well. The more general conclusion is of relevance for governance research at large. Law matters for modes of governance. This contribution shows – not empirically along case studies, but by analysing the law itself – how the law inherently conducts to different modes of governance. This is important as it illustrates the different shades of ‘top-down’ approaches (Lübbe-Wolff, 2001), as the law is often considered and rejected in governance research. So, this contribution is an appeal to consider the role of the law and its specific nuances in terms of governance.

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