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The role of discourses in understanding institutional stability and change – an analysis of Dutch flood risk governance

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ABSTRACT

Societies are faced with aggravating environmental challenge. To respond to these challenges with desired institutional changes, we need to understand the processes of institutional stability and change. This paper adds to the literature on institutional dynamics by focusing particularly on the various roles of discourses. It examines the interaction of emerging discourses and pre-existing governance arrangements and their outcomes; not by zooming in on a specific policy concept but by scrutinising the long-term development of a policy domain, namely flood risk governance (FRG) in the Netherlands. Based on an abductive analysis, we created a typology that shows the influence of emerging discourses on stability or change of pre-existing governance arrangements. At the one end of the ideal-typical continuum, the pre-existing arrangement remains relatively unchanged or is even strengthened. At the other end of the continuum, little remains of the pre-existing arrangement, i.e. emerging discourses are institutionalised, substituting existing institutions with new rules or organisations. Between these two extremes, several hybrid types can be identified (e.g. absorbing, merging, layering, weakening). Although there is clear evidence of incremental changes and adjustments in the Dutch FRG, fundamental changes are missing due to the path dependency of the strong hydro-engineering governance arrangement.

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Discourses; institutions; discursive institutionalism; transformations; path dependency; flood risk management

1. Introduction

Societies are faced with enormous environmental challenges, e.g. global environmental degradation or increasing risks due to climate change, whereof flood risk is among the most visible. These challenges induce new ideas on how to organise society and the economy. Consequently, they ask for continuous adjustments, revisions, new interpretations or even radical transformations of contemporary institutions (Burch et al., 2019; Chaffin et al., 2016; Djalante et al., 2011; Folke et al., 2005; Patterson et al., 2017). In the resilience literature, the diversity hypothesis asserts that institutional variety is imperative to tackle complex issues such as climate change (Duit et al., 2010). This is also a popular notion in flood risk management (FRM): in the context of increasing flood risks, a diversification of strategies is supposed to enhance societal resilience, namely the capacity to resist, to absorb, and to recover (Hegger et al., 2014, 2016; Wardekker et al., 2010 see Table 1 for an overview of different FRM strategies). These new or changed understandings, conceptualised as discourses, may demand institutional changes. However, institutional changes are not straightforward but complex (Duit, 2016; Sjöstedt, 2015; Wellstead et al., 2013), for example, actor coalitions might have diverging understandings of physical and societal realities (i.e. discourses), or they might struggle for different interests; path dependency mechanisms might prevent change, or new policy instruments might not be effective or have unintended consequences. Understanding the processes of institutional stability and change is a precondition

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Table 1. Substantive flood risk strategies (Hegger et al., 2014).

Strategy	Prevention	Defence	Mitigation	Preparation	Recovery
Approach	Reduce exposure to floods	Reduce probability of flooding	Reduce vulnerability to flooding		
Measures, e.g.	Prohibition of construction	Dykes, retention areas	Flood-adapted spatial planning infrastructure	Emergency management	Insurance

for responding to these new challenges as otherwise, newly designed institutions might in the end be ineffective or not accepted as legitimate.

This paper focuses on the various roles of discourses in institutional dynamics, both as factors contributing to change and factors contributing to stability (Feindt & Oels, 2005; Hajer, 2005; Sharp & Richardson, 2001). It acknowledges that the creation of (new) societal meanings and understandings is important for institutional change, and highlights that their influence is never straightforward or easily traceable. Emerging discourses may *conflict* with established discourses, which are stoutly embedded in existing institutions; or they may *strengthen* them. Institutions are understood as the organisational patterns of governance arrangements (Hall & Taylor, 1996, see section 2.1). Hence, institutional dynamics originate from the interaction of emerging discourses and the pre-existing governance arrangements. Previous work that analysed governance arrangements from an institutional perspective focussed on describing sector-based governance arrangements more generally (Arts et al., 2000; Litmanen & Kojo, 2011; Rauter et al., 2020; Veenman et al., 2009), evaluating governance arrangements (Alexander et al., 2016), or more generally explaining forces of stability and change (Wiering et al., 2018), hereby discourses were often considered as a driver of change. This paper, in turn, focuses explicitly on the complex and not straightforward interactions of emerging discourses and pre-existing governance arrangements and offers a unique typology on these interactions.

The paper contributes to the interpretative literature on flood risk management. This literature often focuses on analysing the different discursive positions within the debate on flood risk management (Hidalgo-Bastidas & Boelens, 2019; Hurlbert & Gupta, 2016; Kaufmann & Wiering, 2017; Kuhlicke et al., 2016; Merz et al., 2014; Moon et al., 2017; Rashid, 2011; Solman & Henderson, 2019; Wesselink & Warner, 2010), or explains changes in dominant policy discourses and how that correlates to changes in flood risk management strategies (Van der Brugge et al., 2005; Butler & Pidgeon, 2011; Van Buuren et al., 2016; Garrelts & Lange, 2011; Gralepois et al., 2016; Haque et al., 2019; Immink, 2007; Kaufmann, Lewandowski, et al., 2016). However, only a few explain how these emerging discourses were influenced by institutional factors (Van Buuren et al., 2016; Garrelts & Lange, 2011; Harries & Penning-Rowsell, 2011; Kaufmann, 2017a; Wiering & Arts, 2006). Generally, most of the aforementioned literature references tend to zoom in on specific policy concepts instead of considering longer periods of time and do not theoretically categorise the institutional outcomes of discourse-induced dynamics. This paper contributes to this interpretative literature on flood risk management and the theoretical literature on institutional dynamics (Blyth, 2002; Hall & Taylor, 1996; Pierson, 2000; Sabatier & Weible, 2007; Streeck & Thelen, 2009) by analysing the complex discursive-institutional interaction in the context of an empirical case, namely Dutch flood risk management, across a longer period, namely from 1970 to 2015. The aim is to shed more light on these interactions and to establish a first typology that systematises the outcomes of this interaction. The paper addresses the following research question: how does the interaction of emerging discourses and pre-existing governance arrangements explain stability and change in Dutch flood risk governance?

We reflect on the conceptualisation of discursive institutionalism (Section 2) and our methodological approach (Section 3). Subsequently, we analyse flood risk governance in the Netherlands (Section 4), which is the basis for inductively developing a typology of discursive institutional interactions (Section 5).

2. Conceptualising discursive institutionalism

In 2012, Schmidt (2012) coined the term ‘discursive-institutionalism’ as an umbrella for theoretical approaches that are concerned with the interactive communicative processes of discourse and policy

argumentation in an institutional context. Already in 1989, Stone (1989) emphasised the important role of causal stories in the processes of problem defining and political agenda-setting and in 1993, Fischer and Forester (1993) proclaimed the argumentative turn in policy and institutional analysis. Instead of focusing mainly on analysing the inputs and outputs of the policy process, this new set of approaches focused on: how social reality is shaped by language; how actors differ in their normative interpretation of a problem; and how they consequently struggle to develop policy responses in the light of differing conceptions of reality, i.e. discourses (Fischer & Forester, 1993). Comparably, Hay (2002) stated that strategies of actors (e.g. seeking change) cannot do without interpreting the world in which they find themselves: 'Ideas provide the point of mediation between actors and their environment' (Hay, 2002, p. 210) and thus inform and steer strategic action. In other words, discourses are constitutive of institutions, while simultaneously being constituted by institutions (Philips & Jorgensen, 2002, p. 20).

2.1. Concepts: discourses and institutions

We understand discourses as categorisations and concepts that give meaning to physical phenomena and social realities (Hajer, 1995, p. 44). There are various discursive approaches, and some of these approaches state that there is nothing outside of discourse (e.g. Laclau & Mouffe, 1985), whereas others distinguish between 'discursive' and 'non-discursive' elements (e.g. Fairclough, 2003; Foucault, 1972; Hajer, 1995). As we speak of 'discourses' next to 'institutions' we align with the latter, adopting a weak-constructionist position (Hay, 2002). Discursive approaches also treat the role of agency differently. Whereas some authors focus on the workings of discourses as disciplining and constraining structures, paying less attention to agency (e.g. Foucault), others, such as discursive psychologists Potter and Wetherell (1987), consider discourses as a flexible repertoire that actors can use to construct their version of reality (Jorgensen & Philips, 2002, p. 105). We align with Hajer (1995) and Schmidt (2008) who have a more intermediate approach. Hereby, discourses are, on the one hand, recognised as structures that influence how actors perceive reality. In this sense, they constrain the behaviour and actions of actors. On the other hand, we presume that, in language, symbols, categorisations, policy concepts, in short in discursive practices, actors can act and reflect on their position when they are confronted with alternative discourses and subsequently can change their environment and the structures that dominate it.

Discourses and institutions are very closely related to each other. Discourses constitute and constrain (patterns of) behaviour and so materialise into ways of doing and thinking, and these ways can be considered 'institutions' in a broader sociological meaning of institutions. Institutions may be described as sedimented discourses (Philips & Jorgensen, 2002, p. 62), or temporary stabilisations of discourses (Arts et al., 2000, p. 54f). We understand institutions as the 'formal or informal procedures, routines, norms and conventions embedded in the organisational structure' (Hall & Taylor, 1996, p. 6). This refers to a more limited meaning of institutions as organisational patterns. Institutions thus contain and reflect discourses but they are not the same. We make an analytical distinction between discourses (ideational) and institutions (material and organisational) to be able to explain institutional dynamics.

As social institutions can be considered very broadly (e.g. marriage, carnival), we use the term governance arrangement in this paper to emphasise our focus on public policy. A governance arrangement is to be understood as the temporary stabilisation of institutionalised discourses and three organisational-institutional dimensions, namely (1) the actor dimension, i.e. the configuration of the state, market and civil society actors and their roles, responsibilities, and relationships, (2) informal and informal rules, and (3) the division of resources; concerning the governance of a specific public domain (based upon Arts et al., 2000; Hegger et al., 2014). We analytically delineate governance arrangements based on policy sectors (e.g. water management, agriculture, nature conservation, spatial planning). We analyse institutional dynamics based on the changes in these three organisational dimensions (see Table 3), whereby fundamental changes imply substantive changes in all dimensions (Wiering & Arts, 2006), so in actor constellations, rules of the games, and the division of resources.

2.2. Discourse institutionalisation

Now we elaborate on how discourses materialise, i.e. are institutionalised. Hajer (1995) distinguishes between (1) discourse structuration, namely when discourses become widely accepted and influences the way a broad set of actors conceive particular problems, and (2) discourse institutionalisation, namely when structured discourses become increasingly stabilised, routinised and eventually fully embedded and institutionalised in rules, resources and actor constellations.

Whereas Hajer's two-step model may imply a relatively linear approach to discourse institutionalisation, Phillips et al. (2004) stress that it is a much more iterative and recursive process. They acknowledge that existing, stabilised discourses and (organisational) institutions enable and constrain actions and, hence, affect the emergence and development of new discourses (Phillips et al., 2004, p. 646). After all, institutions mature and may become increasingly embedded in path dependency processes. This is described and categorised by scholars on path dependency (Arthur, 1988; North, 1990; Pierson, 2000). Path dependency mechanisms, or 'forces of stability' are: (1) Coordination effects: governance is grounded in specific divisions of accepted responsibilities; (2) Fixed costs and increasing returns through large investments in flood infrastructure; (3) Learning effects: evolution of a strong expert body of knowledge and a strong epistemic community; (4) formalisation of rules and procedures (law), which are difficult to change; and (5) adaptive expectations: public trust in existing institutions and their efficiency (see Table 3; Wiering et al., 2018). Subsequently, governance arrangements can be more or less susceptible to change (cf. Mahoney & Thelen, 2009), i.e. emerging discourse.

Further, Phillips et al. (2004) purport that the institutionalisation of discourses depends on (i) the degree to which the discourse is internally coherent, (ii) its consistency with the order of discourse, and (iii) the existence of competing discourses. Hajer (1995), too, stresses the importance of discursive struggles between opposing discourse coalitions. Hence, actors are the mediators of stability and change. They can increase the resonance and credibility of discourses because of their legitimising status (e.g. as experts) or by linking emerging discourses to hegemonic discourses (Phillips et al., 2004). And, finally, events are important, especially in flood risk management. Dislocation events (e.g. important floods, or periods of droughts) may destabilise hegemonic discourses as they fail to be in line with accepted risks and accepted 'reality' (compare Van den Brink, 2009, p. 31ff). Especially dislocation events offer moments for discursive struggles because they give actors the possibility to challenge the formally stable order of discourse and reconnect previously unconnected discourses (Hajer & Versteeg, 2005, p. 185).

The term 'order of discourse' has already been mentioned. We use this analytical concept to describe the complex configuration of interrelated (existing and emerging) discourses that partly cover the same social terrain, i.e. flood risk governance, and their positioning therein, e.g. opposing or supporting each other (Phillips & Jorgensen, 2002, p. 74, 141). In this paper, we focus on the order of discourse related to the Dutch flood risk governance arrangement [e.g. leading concepts and vocabulary in water management and risks, e.g. 'the battle against water', 'flood defence', 'multi-layered safety', 'the safety chain', 'risk probabilities and consequences'; or new connections to spatial planning, nature conservation, e.g. 'room for the river', 'building with nature'; or concerning the roles of parties involved ('from government to governance', 'participatory planning', 'integrated water management', etc.)]. Within this order of discourse, we distinguish governance discourses (discourses on the responsibilities of the state, market and civil society and their interrelationships in a specific public domain) and substantive discourses (e.g. the actual risk discourse related to floods or droughts) (Kaufmann & Wiering, 2017).

We have given our position on discourse analysis and institutions and clarified the use of terms. Then we discussed interrelations between discourses (as ideational elements) and institutions (as organisational elements) and the role of forces of stability and change in governance arrangements. Finally, we discussed the dynamics of newly emerging discourses and (path-dependent) established discourses by way of the order of discourse in a field. We concluded that the interaction of emerging discourses and pre-existing discourses and institutions may be influenced by (1) characteristics of the pre-existing governance arrangements (its 'strength' and susceptibility to change); (2) the order of discourse; and (3) the role of agency, i.e. the actors'

capability to influence the debate, for example by ‘exploiting’ dislocation events. In the next section, we will discuss the theoretical innovation of the paper, leading to a new typology.

2.3. Typologies of institutional change

The development of the typology (see section 4) was an iterative process. First, we wrote a historical account of the flood risk governance arrangement in the Netherlands from the 1970s to 2015 based on qualitative research (Kaufmann, Van Doorn-Hoekveld, et al., 2016, see method section) and validated our findings by discussing it with practitioners (Steenstra et al., 2015). Subsequently, we revisited this account with a focus on discursive changes in policy documents and whether these corresponded with changes in the governance arrangement in terms of rules, resources, actors and their role. We concluded that most changes were incremental, which brought us to Streeck and Thelen’s (2005) typology of incremental changes. Streeck and Thelen (2005, p. 19ff) distinguish between: ‘displacement’, i.e. the effect when new institutional models are introduced that delegitimize older, traditional practices; ‘layering’: the introduction of new rules on top of or alongside existing ones; ‘drift’: the changing impact of existing rules due to shifts in the broader institutional or societal environment; to be considered as ‘rules drifting away’ from ‘realities’; and ‘conversion’: the changed enactment of existing rules owing to their strategic deployment (Van der Heijden, 2010; Mahoney & Thelen, 2009). Both in Streeck and Thelen (2005) and in Mahoney and Thelen (2009) there is no specific analytical place or role for discourses in explaining change or stability. We realised that some of the interactions, when specifically looking at discourses and the pre-existing governance arrangement, could not be covered by Streeck and Thelen’s typology. Hence, we adopted their basic idea and applied it to typify specific discursive-institutional interactions, arguing that the ideational element in institutional change deserves more systematic attention. We then needed a typology that systematically dealt with emerging discourses and the pre-existing governance arrangement.

3. Methodological accounts

3.1. Case selection

Empirically, the paper focuses on flood risk governance in the Netherlands. This case study allows us to study the interaction of a pre-existing governance arrangement and discourses over a longer period: from the 1970s till 2015. This period is characterised by the firm institutionalisation of a hydro-engineering-based flood defence approach, but also covers the emergence of various counter-discourses as responses to societal challenges, such as environmental discourses or a risk discourse based on the management of consequences and probabilities. These discourses subsequently interact with the firmly institutionalised arrangement (Kaufmann, 2017a; Wiering et al., 2018), which promises interesting conceptual insights (Yin, 2009). Although we also studied regional cases in the Netherlands (Kaufmann, Van Doorn-Hoekveld, et al., 2016), the paper focuses on the main *national* developments and considers discursive-institutional interactions from a macro and long-term perspective.

3.2. Data collection

The data collection for this research consisted of document analysis (national policy and legal documents, governmental or advisory reports and scientific research), semi-structured interviews, and observations of various stakeholder meetings (see Annex 1, 2). To identify policy documents, we took the periodically published national policy documents *Nota Water Management* (1968, 1985, 1989, 1997, 2008) and National Water Plans (2009–2015, 2016–2021) as a starting point to identified other relevant documents mentioned within these documents (see Table 2).

This paper pieces together previous research on institutional dynamics in Dutch flood risk governance by the authors (Kaufmann, 2017a, 2017b; Kaufmann, Lewandowski, et al., 2016; Kaufmann, Mees, et al., 2016;

Table 2. Overview of analysed policy documents.

Year	Policy Document
1968	1st Nota Water Management
1985	2nd Nota Water Management
1985	Policy 'Dealing with Water' (in Dutch: Omgaan met water)
1989	3rd Nota Water Management
1995	Delta Plan Great Rivers (in Dutch: Deltaplan grote rivieren)
1996	Policy Room for the river (in Dutch: Beleidslijn Ruimte voor de rivier)
1997	4th Nota Water Management
2000	Committee Tielrooij
2000	Policy 'Dealing differently with Water' (in Dutch: Anders omgaan met water)
2006	Policy Great Rivers (in Dutch: Beleidslijn Grote Rivieren)
2008	Report Committee Veerman
2008	National Water Plan 2009–2015
2011	Delta Program 2012
2012	Delta Program 2013
2013	Delta Program 2014
2015	Delta Program 2015
2015	National Water Plan 2016–2021

Kaufmann, Van Doorn-Hoekveld, et al., 2016; Kaufmann et al., 2018; Wiering & Arts, 2006; Wiering & Winubst, 2017; Wiering & Immink, 2006) to draw more overarching conceptual conclusions on discursive-institutional interactions. In total, 40 governmental and nongovernmental stakeholders were interviewed from the realm of government, industry (e.g. insurance) and societal interest groups. Additionally, representatives from different policy levels (e.g. national ministries, regional provinces and local municipalities) and different policy sectors (e.g. regional and national water managers, spatial planning authorities and emergency managers) were interviewed between 2014 and 2016 (see Annex 1). The respondents were chosen based on a stakeholder analysis that yielded an overview of responsible actors, subsequently, the snowball technique was employed to find additional respondents. With the interviewees, we discussed the chronological development of particular policies and strategies, the corresponding changes in rules, actors and resources, and the underlying discursive changes. The interviews were recorded and transcribed. The results were further informed when presented, discussed and validated during two national stakeholder workshops.

3.3. Data analysis

An in-depth study was carried out in which we scrutinised the characteristics of texts (policy documents and interview transcripts) focusing on the role of emerging discourses and the resulting institutional dynamics. Based on our theoretical framework, we identified sensitising concepts (Table 3; Blumer, 1969). We used an abductive coding approach (Eriksson & Lindström, 1997), which offers a more creative way to the analysis by combining insights from deductive and inductive reasoning. First, we employed a more deductive approach, i.e. we used the analytical concepts as sensitising concepts (Table 3) to filter the text and identify the important information. This approach was facilitated by the software programme Atlas.ti. Second, we further specified codes in an inductive manner (e.g. 'discourse_room for the river'; 'discourse_risk') to identify patterns and developments over time. By developing a timeline, we traced discursive changes and corresponding policy changes (Annex 3).

4. Flood risk governance in the Netherlands: analysing discursive- institutional interactions and their outcomes

4.1. The status quo: institutionalisation of the hydro-engineering discourse

Flood risk management (FRM) has a long tradition in the Netherlands. Already in the Middle Ages, a hydro-engineering discourse emerged, which emphasised that 'nature' could and should be controlled by mankind

Table 3. Overview of sensitising concepts.

Concept	Definition/operationalisation
Discourse	<ul style="list-style-type: none"> • Meaning given to social and physical world (Hajer, 2995) • changes in discourse have been identified by changes in language and meaning given to particular issues (e.g. flood, risk, water, responsibility, environment, management approaches)
Order of discourse	Constellation of discourses in a specific policy sector; discourses can interact, e.g. antagonistically opposing or strengthening (Fairclough, 2003)
Discourse coalition	Ensemble of story lines representing a discourse and the actors that utter them (Hajer, 1995)
Dislocating event	Event, e.g. flood event, that disturbs the hegemonic discourses because it cannot be understood/legitimised within the established discourses (Van den Brink, 2009)
Identifying dynamics in governance arrangement	<p>Rules:</p> <ul style="list-style-type: none"> • adjustment/addition/removal of substantive rules (e.g. emergence of new policy instruments) and/or procedural rules (e.g. on public participation) <p>Actors:</p> <ul style="list-style-type: none"> • broadening/narrowing of number of involved actors and their task • adjustment of interaction/communication between actors <p>Resources:</p> <ul style="list-style-type: none"> • Change/stability of knowledge and expertise • Change/stability of financial distribution <p>Fundamental changes = major changes in all organisational dimensions Incremental changes = minor changes in some organisational dimensions</p>
Path dependency mechanisms (Wiering et al., 2018)	<ul style="list-style-type: none"> • Coordination effects: governance is grounded in specific divisions of accepted responsibilities • Fixed costs and increasing returns through large investments in flood infrastructure • Learning effects: evolution of strong expert body of knowledge and strong epistemic community • Formalisation of rules and procedures (law) • Adaptive expectations: public trust in existing institutions and their efficiency

through engineering expertise. Local communities constructed dams and dykes, reclaimed land and used windmills to pump areas dry to reduce the probability of flooding (Van Heezik, 2006). To ensure the quality of this extensive infrastructure, specialised actors – the regional water authorities and the national agency *Rijkswaterstaat* (in 1798) – were established to construct and manage the embankments (Van Heezik, 2006). To carry out the task, they needed to have secure financing, which was ensured through the establishment of regional water taxes. This raised expectations among other stakeholders, hence water managers needed to keep on improving their hydro-engineering knowledge and expertise (learning effect). This resulted in societies' increased acceptance and reliance on hydro-engineering flood defence infrastructure (adaptive expectation). Other governmental actors became increasingly disengaged from FRM (coordination effect), which again led to an increased need to improve expertise and investments in structural measures. These *incremental processes of mutual reinforcement* resulted in a stout institutionalisation of the hydro-engineering discourse (see Kaufmann, 2017).

In 1953, a storm surge flooded large parts of the Western Netherlands and claimed over 1800 fatalities. This event narrowed the *order of discourse* re-strengthening (1) a governance discourse on solidarity and the state as the provider of safety, and (2) a substantive discourse on flooding as an 'apocalyptic' risk that endangers the habitability of the country and that should be prevented: 'never again [such a disastrous flood]' is a storyline repeated until today (Kaufmann et al., 2018). The organisational-institutional consequence included the establishment of semi-formalised technical safety standards for the primary flood defences (Van Danzig, 1956, 1st Nota Water Management). It also led to the *abolishment* of insurance coverage from large-scale floods (Jongejan & Barriue, 2008). In 1955, the Dutch Association of Insurers issued a binding agreement forbidding its members to insure flood damages caused by the failure of flood defences. It was agreed that private insurance was not feasible in the face of such extreme risks and could endanger the business continuity. Additionally, accepting damage and assuming recovery from a flood clashed with the 'never again' storyline of the government as the provider of safety. Hence, there was no relevant *discourse coalition* advocating for an insurance

system and the existing insurance arrangement was not particularly stabilised given the temporary nature of insurance contracts (Jongejan & Barriau, 2008).

The hydro-engineering discourse became widely structured and deeply institutionalised in rules, standards, and a dominant role of water managers with only a minor role for other policy sectors, e.g. spatial planning or emergency management, or private actors, e.g. the insurance sector. Substantively, that indicates that the flood defence strategy (see Table 1) became dominant in the Netherlands.

4.2. The rise of environmental discourses and integrated water resource management

In the 1970s, the *order of discourse* related to FRM was gradually broadened. Two counter-discourses emerged: an environmental discourse (2nd Nota Water Management, 1984), which reflected an increasing acknowledgement of environmental values and water as a 'friend', and an integrated water management discourse (*Omgaan met Water*, 1985, 3rd Nota Water Management, 1989), which envisioned a comprehensive approach to water management based on the collaboration of various stakeholders. Whereas the environmental discourse criticised the substantive outcome of hydro-engineering interventions, namely the adverse ecological and societal consequences of hydro-engineering projects (e.g. of Delta Works), such as eutrophication or relocation of villages; the integrated management discourses opposed the quantitative, authoritarian, water sector-dominated governance approach (Lintsen, 2005). Hence, societal and political support for engineering projects decreased (Bosch & Van der Ham, 1998; Disco, 2002). These two emerging discourses aligned and supported each other but opposed the existing –strongly institutionalised– hydro-engineering arrangement.

On the one hand, the two emerging discourses (environmental and integrated water management) were influenced and supported by the emergence of global environmental discourses (e.g. Club of Rome), on the other hand, the environmental *discourse coalitions* started experimenting with local projects that integrated nature and water management, e.g. Plan Stork (in Dutch: *Plan Ooievaar*, 1986) and Living Rivers (in Dutch: *Levende Rivieren* 1992; Disco, 2002; Van den Brink, 2009). They became the breeding grounds for transformational and radical ideas on greening water management and democratisation of the flood defence institutions.

The disastrous high-water levels in 1993 and 1995 on the rivers Rhine and Meuse functioned as *dislocation events* and influenced the discursive struggle between these opposing *discourse coalitions*, i.e. water engineers and an environmental coalition. The first political reaction was to strengthening the hydro-engineering arrangement: The Delta Plan Major Rivers (1995) functioned as an emergency act to accelerate dyke strengthening by suspending the Environmental Impact Assessment. Hence, the environmental discourse and its institutionalised instrument (i.e. EIA) were *weakened*. The Flood Defence Act (*Wet op de waterkering*, 1996) legally formalised the safety standards for dykes established in 1956 (Driessen & De Gier, 1999; Van Rijswick & Havekes, 2012). Hence, the hydro-engineering discourse, its existing institutions and with it the flood defence strategy were *strengthened*. How may this weakening of the environmental discourse and the *crisis-induced strengthening* of the hydro-engineering discourse be explained? Firstly, water engineers temporarily narrowed the *order of discourse* by following back on crisis vocabulary that emphasised the 'fight against water'. Their long-established expertise gave them legitimacy and their historical access to decision-makers provided them with the opportunity to increase the resonance of the hydro-engineering discourse. Secondly, they had the expertise and resources to provide rapid solutions. Nevertheless, these dyke improvements were conducted with more consideration for landscape, cultural and nature conservation values (Van Rijswick & Havekes, 2012). Hence, even though the environmental discourse was weakened, aspects of it were *absorbed* in the Delta Plan Major Rivers. A reason for this is that the epistemic community of water authorities had gradually changed (i.e. including increasingly also biologists (Van der Brugge et al., 2005)), which enabled this absorption.

Looking back at this episode and this part of FRM, we can conclude that the policy- and institutional stability that lasted about 25 years in which river floods and dyke enhancement was discussed, was in part related to the 'classic' economic *path dependency* mechanisms such as fixed costs, increasing returns, technocratic expertise and a relatively closed epistemic community as well as an independent functional organisation of

water managers, however, the stability was also because of strongly competing coalitions and a relatively low urgency of enhancing the river dykes, as these 25 years were also remembered as the years of stalemate or ‘dialogues of the deaf’ (Van Eten, 1997). In other words, stability can come from hegemonic discourses, but also from dominant, inconclusive fights over the best approach to flood risk management, which lead to a stalemate.

The Flood Defence Act of 1996 stipulated the regular evaluation of the primary flood defences to see whether they achieved the safety standards. The results indicated that indeed around 30% did not reach the safety standards (Inspectie Verkeer en Waterstaat, 2011). Hence, a programme was initiated to improve and strengthen the primary flood defences, the Flood Protection Program (in Dutch: *Hoogwaterbeschermingsprogramma* since 2001). However, in contrast to earlier dyke strengthening programmes, this programme reflected a different governance approach. Instead of working in an authoritarian way, national and regional water managers needed to consult regional and local stakeholders and discussed alternatives to identify a preferred strategy to be further developed (I&M and UvW, 2013). While the output of the existing hydro-engineering arrangement remains relatively unchanged (i.e. the construction and maintenance of embankments by the engineering-based water sector), the project formulation processes yielding these outputs had been adjusted to be more participatory, multi-sector, flexible and transparent. This adjustment took place in the context of a broadening *order of discourse*: new governance discourses on democratisation emerged (Schwarz, 1993) independent of flood risk management and were institutionalised in other policy sectors, for example, new participatory procedures such as MIRT or Environmental Impact Assessment (Kaufmann, 2017a). Hence, these temporary discursive changes became stabilised and gradually naturalised within political and societal spheres. As a consequence, the autonomous decision-making style of water managers was subject to political and societal controversy and was losing legitimacy. However, it had been stabilised through *path dependency mechanisms*; the probability-reducing governance arrangement with public responsibility had been constitutionally institutionalised (formalisation of rules) and its function (i.e. keeping the feet dry) had been accepted and expected by the general public (adaptive expectations). By *absorbing* these governance discourses and adjusting their procedures, the challenged legitimacy of water managers was partly restored.

The second reaction to the floods was the introduction of the policy programme ‘Room for the River’ (Policy room for the River, 1996; PKB, 2006; V&W and VROM, 2006), which financed river-widening projects with €3.6 million, was introduced. Substantively, this programme still adhered to the flood defence strategy (see Table 1) as it aimed to reduce the probability of flooding, however, it still indicated a shift within the strategy towards more ecosystem-based approaches instead of purely engineering. This programme merges several discourses: (a) a hydro-engineering discourse that is (still) based on controlling the water, (b) an environmental discourse that aims to give more room to natural dynamics, and (c) an integrated management discourse that foresees the cooperation of different actors, sectors and levels of government in river basins and across boundaries. The programme aims to increase the discharge capacity of rivers by relocating dykes or deepening the riverbed. However, it is not the idea of developing wild river corridors envisioned by environmentalists in their ‘living rivers’ ideas (Staatsbosbeheer, 2003). The aim is still to keep the water away from people and to control the water between the dykes, only now the floodplains are wider in some places, there are side-channels and spatial measures. While local actors (e.g. the municipality), different policy sectors (e.g. spatial planning, nature conversation) and private actors (e.g. private constructors) play an important role in the projects, national water managers remain dominant actors in the programme and quantitative calculations remain the basis for management measures (Kaufmann et al., 2016a; Roth et al., 2006; Wiering & Winnubst, 2017). How can this be explained?

The different *discourse coalitions* base their influence on various sources. The water engineers receive their power from the existing institutions that have been stabilised through *path dependency mechanisms*, namely the formalisation of rules, which provide them with legal and financial resources, and through learning effects, which provides them with knowledge resources. The environmental coalition receives its power from the national and *international order of discourse*, which, in the context of uncertain climate change outcomes and sustainability, made the political and societal climate susceptible to more environmental, democratisation

and integrated management approaches (Kaufmann et al., 2016a). In this stalemate, the two coalitions needed to develop a compromise. This was enabled as, firstly, the epistemic community within governmental water authorities had already broadened in the previous years (since the 1970s), so that, next to hydro-engineers, also increasingly biologists were part of these organisations (Disco, 2002; Van der Brugge et al., 2005). Secondly, nature conservation organisations had already implemented pilot river-widening projects. Before the flood events of 1993/1995 accelerated change processes, a lot of groundwork had been laid, which functioned now as inspiration. That appears to have facilitated the *merging* of the various discourses, including environmental, hydro-engineering, and integrated-water management.

4.3. Emergence of a sustainable urban water management discourse

In 2000, the Tielrooij committee (2000) analysed the current water management and its adequacy for future challenges, such as climate change. It picked up the discourse on integrated water management but also introduced an emerging discourse on sustainable urban water management with the idea to introduce a 'Water Assessment' policy instrument, which was eventually institutionalised in the Spatial Planning Decree in 2001. Substantively, this instrument meant a broadening of flood risk strategies towards a flood mitigation and prevention strategy (see Table 1). Water managers give nonbinding advice to facilitate the consideration of water issues in spatial planning, hence integrating the two policy sectors. The discourse on sustainable urban water management catered to a new risk, namely pluvial flooding, which was projected to increase due to climate change. It did not challenge the hegemonic hydro-engineering or the dominant governance discourse. Rather water engineers advocated for the 'Water Assessment' as it would prevent uncoordinated urban planning, which increasingly impeded their work (Kaufmann, 2017). The discourse on sustainable urban water management connected the orders of discourse of two policy sectors, namely water management and spatial planning. The policy instrument 'Water Assessment' was institutionalised in the spatial planning sector and hence *layered* next to the existing hydro-engineering institutions.

4.4. A discourse on private responsibility

Around 2000, a discourse on private responsibility peaked its head. In light of climate change, it was questioned whether citizens should become more active as absolute safety might not be always guaranteed (see risk discourse below). The 4th Nota Water Management (1997) talked about precautionary measures undertaken by individual citizens (p. 37) and the Tielrooij committee mentioned the possibility of insurance against fluvial flooding (Tielrooij Commissie, 2000, p. 87). However, discussions remained limited and a broad discourse structuration never took place – the discourse was *averted*. Hence, the institutional implications remain limited: a wide insurance coverage against fluvial and coastal flooding is missing. Only one insurer offers insurance coverage against fluvial flooding with apparently limited market penetration (Kaufmann, 2017a) and a communication strategy was initiated to increase awareness of citizens for flood risk ('Leven met water'), but its impact was limited. That means, substantively, a clear broadening towards the flood recovery strategy (Table 1) did only take place very marginally.

The absence of a broader discourse structuration and institutionalisation may be explained as follows: (1) A risk discourse leading to private responsibility opposes the existing naturalised governance discourse on public responsibility (e.g. solidarity, apocalyptic risk, 'natural role' of government under conditions of market failure). As a consequence, private responsibility for flood risks is not societally or politically acceptable, as it does not fit into the naturalised configuration of discourses that are deeply embedded in Dutch culture. Additionally, (2) the existing institutional arrangement reflecting this discourse on public responsibility is stabilised through a range of *path dependency* mechanisms. For example, citizens expect governmental protection and feel entitled to it as they pay water taxes (adaptive expectations). Hence, they would not accept an extra financial burden. However, if water taxes would need to be abolished because they cannot be legitimised anymore, then the expensive hydro-engineering approach might be endangered. The *order of discourse*

and the stabilised governance arrangement *averted* the emerging discourse on private responsibility and prevented any discourse structuration.

4.5. The emergence of a risk discourse based on the management of consequences and probabilities

Since 2000, a new, risk discourse that advocated the management of consequences and probabilities became gradually more central in the *order of discourse* on water management. It was increasingly acknowledged that ‘something can go wrong’ (V&W, 2000, p. 38) and that both a flood’s probability and its consequences should be managed. Particularly, as the vulnerability to flooding had increased since 1953 because of urban development in flood-prone areas (RIVM, 2004). In 2005, Hurricane Katrina functioned as a *dislocation event*. It supported the discourse structuration of the risk discourse as it raised the question of whether something similar –disastrous flooding of coastal areas– could also happen in the Netherlands and whether the country would be prepared for it (Kaufmann, Mees, et al., 2016). An immediate institutional response was the establishment of the multi-ministerial Taskforce Management Flooding, which was set up in 2006 to improve emergency management in case of flooding (TMO, 2009). The coordination of emergency and crisis management was further improved through the Security Regions Act (*Wet Veiligheidsregio’s*, 2010), which was not primarily established because of flood risk, but as a result of several accidents (e.g. industrial fire). Emergency management was strengthened and *layered* next to the existing hydro-engineering arrangement. Substantively, the Taskforce Management Flooding and the Security Regions Act indicated a broadening towards a flood preparation strategy (see Table 1).

The official introduction of the risk-based policy concept Multi-Layered Safety (MLS) in 2008 combined these previous institutional developments and proclaimed three main management strategies: (1) structural hydro-engineering defence infrastructure, (2) adaptive spatial planning (incl. Water Assessment) and, (3) emergency management (V&W, 2008).

MLS is related to the introduction of a new dyke safety norm. Already in the 1960s, the 1st delta committee talked about ‘risk’. However, until the beginning of the 1990s technology and expertise were not developed enough to calculate the consequences of flooding. Hence, the risk-discourse could not be institutionalised. From 1992 to 2000, the Technical Advisory Committee for Dykes (in Dutch *Technische Adviescommissie voor de Waterkeringen*) developed a new safety norm, which considered both the consequences and the probability of floods (TAW, 2000). Instead of having a norm that considered the overtopping probability of the dyke, the new ‘flooding probability’ also considers the consequences of a flood. It further comprises a basic safety level, which states that every individual shall have a probability of dying due to flooding of 1: 100.000 per year. This safety level might be achieved through dykes, but could also be achieved through emergency management as it comprises an evacuation factor. The risk discourse was absorbed into the new safety norm.

A discursive struggle emerged between a *discourse coalition* pleading for a new, more comprehensive risk approach with a broader portfolio of risk management strategies, and a classic water manager coalition that argued ‘a euro can only be spent once’ and should be invested in flood defence measures (Kaufmann, Mees, et al., 2016). Essentially, the first layer (hydro-engineering flood defences) remained ‘the basis for achieving the required protection level’ with spatial planning measures and emergency management merely supporting (I&M and EZ, 2014, p. 65). How can this be explained?

With the economic crisis in 2008, economic efficiency became increasingly important. This led to the strengthening of a general discourse on New Public Management (NPM). This general societal development also affected flood risk management. NPM promoted increasingly cost–benefit analyses as an accepted decision-making tool. This strengthened the existing hydro-engineering institutions as embankments turned out to be the most cost-efficient strategy due to the past investments in infrastructure (*path dependency mechanism*: fixed costs). In other words, the new public-management discourse *revitalised and strengthened* the hydro-engineering defence arrangement, as it constructed its path-dependent cost-efficiency as something positive.

Additionally, the hydro-engineering governance arrangement stabilises the hydro-engineering discourse and is only limited susceptible to change as a consequence of *path dependency* mechanisms. Water authorities are accountable for their duties, i.e. fulfilling the safety standard (formalisation of rules). The accountability

regulations for water managers can be based on quantitative assessments and projections of water levels and the correlating height of the embankments (learning effects). However, the effect of other measures, like spatial planning measures, is less easy to quantify, which makes it difficult to legally establish new accountabilities. Therefore, a change of law would be required. However, it is difficult to legally develop, agree on and formulate these new regulations and divisions of responsibility since other actors are hesitant to take on these duties (Kaufmann 2017). Hence, even though MLS increased the attention for alternative strategies, the hydro-engineering arrangement was actually financially strengthened in the context of MLS (I&M and EZ, 2014). MLS may be seen as an umbrella concept comprising several historical developments: hydro-engineering, water assessment instrument and emergency management. It links the orders of discourse of water management, spatial planning and emergency management and links these more or less independent developments, by reconfirming the dominance of the hydro-engineering discourse.

In the context of the risk discourse and a discourse on climate change, a discourse on adaptive delta management emerged around 2012 in the delta programme (Delta Program 2012), which was formalised in the National Water Plan (2016–2021). The discourses stress that one should deal with uncertainty by reacting in a flexible and integrated manner to changing circumstances proclaiming: ‘It is doing what is needed now, not too much and not too little, without excluding future possibilities.’ (DP, 2011 [2012], p. 8). However, in practice introducing this flexibility appears to be difficult. Even though policymakers cooperate more with other stakeholders in the Delta Program, making use of scenarios adaptation pathways, the focus, however, stays on government-led, technocratic approaches (Restemeyer et al., 2017).

Figure 1 summarises the discursive developments and the outcomes of the discursive-institutional interaction.

5. Reflection and conclusion: the outcomes of discursive-institutional interactions

5.1. Outcomes of discursive-institutional interactions

In this article, we analysed the development of Dutch FRM from a long-term, macro -perspective to scrutinise the varying outcomes of discursive-institutional interactions in terms of stability and change (see Table 4). Based on the empirical analysis, we inductively distinguish seven different outcomes of discursive-institutional interaction, which may be mapped across a continuum (Figure 2). At the one end (left) of the continuum is the

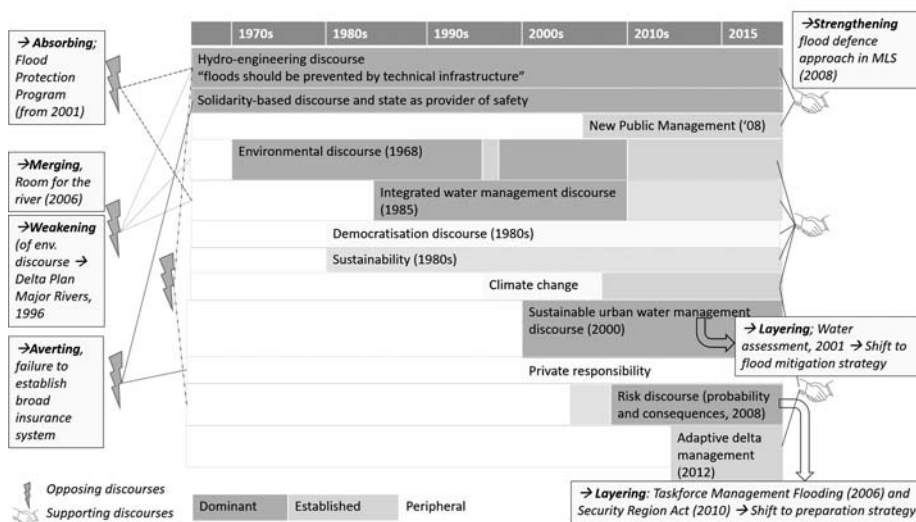


Figure 1. Interaction of discourses from the 1970s to 2015.

Table 4. Overview of outcomes of discursive-institutional interactions.

Outcome of interaction	Empirical example	Changes in the order of discourse	Institutional dynamics (stability/change)		
			Rules	Actors	Resources
Averting	Failure of introducing <i>comprehensive private insurance system</i> (for fluvial and coastal flooding): averted discourse of private responsibility (around 2000)	minimal broadening – failed discourse structuration	Minor changes (procedural adjustments)	hardly any changes in the actor constellations (e.g. accepting private insurance in very specific circumstances only)	Hardly any redistribution of resources
Strengthening	<i>Multi-layered safety</i> with focus on first pillar (dyke-strengthening); hydro-engineering discourse strengthened through NPM-discourse	Broadening (e.g. NPM, 2008) or narrowing (e.g. after flood event 1993/1995)	Further formalisation or institutionalisation of existing rules	Similar or increased legitimacy of existing actors	Increased investments in existing strategies
Absorbing	<i>Flood Protection Programs</i> which absorbed the integrated water resource management discourse	Broadening of general order of discourses	New <i>process</i> rules Similar substantive rules	New cooperation arrangement between actors	No significant redistribution of resources
Merging	<i>Policy Program Room for the river</i> , 2006, which is a merging of the hydro-engineering, environmental and IWRM discourse	(temporary) broadening of policy-specific order of discourse	New (temporal) policies	Broadening of actor constellation, new cooperation arrangements between actors and sectors	Redistribution of financial means in the context of merged policy
Layering	<i>Water Assessment</i> , 2001, which emerged from the institutionalisation of the Sustainable Urban Water Management discourse	Linking of orders of discourse of different policy sectors	New policy instrument	New responsibilities/tasks for actors, new cooperation arrangements	Additional financial means from other sectors
Weakening	<i>Delta Plan Major Rivers</i> , which is a result of the weakening of the environmental discourse	Narrowing of order of discourse	(Temporal) suspension of opposing rules (e.g. EIA)	Suspension of tasks and weakening of actors' position	Less financial investments
Abolishing	<i>Private insurance</i> abolished in 1955	Narrowing of order of discourse	Removal of rules; or prohibition of certain activities (e.g. private insurance for fluvial/coastal flooding)	Narrowing of actors	Withdrawal of financial means

situation where the pre-existing arrangement remains relatively unchanged or is even strengthened. At the other end (right) of the continuum, little remains of the pre-existing arrangement, i.e. emerging discourses are institutionalised gradually, substituting existing institutions with new rules, guidelines, principles, organisations etc. Between these two extremes, several hybrid versions may be identified:

- *Averting*: The emerging discourses fail to reach broader discourse structuration or institutionalisation, i.e. established governance arrangements remain relatively unchanged because no powerful discourse coalition emerges and the discourse opposes naturalised (and hence widely accepted) order of discourse.
- *Strengthening*: We can identify three processes that contribute to a strengthening and stabilising of the pre-existing governance arrangement: (1) incremental reproductive strengthening due to the continuous reproduction of hegemonic discourses, (2) 'revitalised strengthening' due to emerging discourses supporting the status quo, and (3) 'crisis-induced strengthening' due to narrowing order of discourse.
- *Absorbing*: Moving along the continuum towards a hybrid version. Emerging discourses may be absorbed by existing institutions, which leads to an adjustment of the pre-existing governance arrangements [comparable with Streeck and Thelen's (2009) conversion, where institutions are accompanying new purposes].

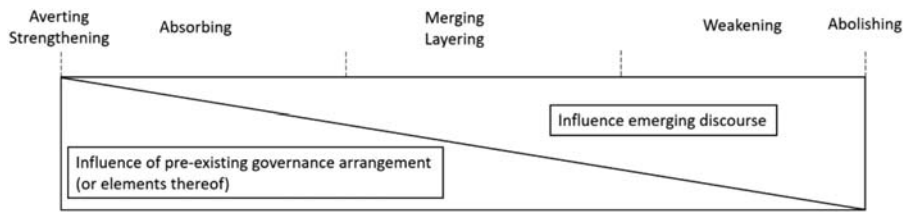


Figure 2. Continuum illustrating the outcomes of discursive-institutional interactions. The ‘pre-existing governance arrangement’ consists of several institutions (rules, guidelines, policy instruments, etc.). It should be noted that it is dynamic and – to different degrees – continuously changing. Hence, this figure is a simplified and ideal-typical illustration of these dynamics.

- *Merging*: of already hegemonic discourses with emerging discourses, which may even be competing. The outcome represents a compromise between the different discourses. It took place when both discourse coalition were relatively powerful and a stalemate situation emerged.
- *Layering*: Parallel institutionalisation of emerging discourses to the existing governance arrangement (see also Streeck and Thelen’s (2009) ‘layering’).
- *Weakening*: At the other end of the continuum, discourses may substantially weaken pre-existing governance arrangements, i.e. decrease their enforceability. This may happen when pre-existing governance arrangements are not stoutly institutionalised but susceptible to change and when the order of discourse is narrowed again.
- *Abolishing*: Emerging discourses may (potentially) also lead to the full abolishment of institutions in a context where the order of discourse is narrowed and institutions are not stabilised.

The order of discourse (i.e. the configuration of discourses) influences these discursive-institutional interactions. This long-term analysis has demonstrated the dynamic -respiratory- function of the order of discourse. Firstly, the order may either be broadened – temporarily or more permanently – thereby providing opportunities for emerging discourses to increase their resonance and become adopted by a broad range of actors achieving discourse structuration (e.g. absorbing, merging). However, orders can also narrow again – temporarily or more permanently, i.e. being dominated by a few hegemonic or naturalised discourses, which may decrease the resonance of opposing discourses (e.g. weakening, abolishing). Secondly, within orders of discourses, we see packages of discourses, i.e. governance and risk discourses that support one another and form conglomerates (e.g. technocratic risk discourse and state-responsibility discourse). The ‘apocalyptic’ flood risk discourse and the governance discourse (it is a public responsibility and a water sector responsibility) are so intertwined that they are mutually reinforcing. They stabilise each other and prevent the emergence of opposing discourses (see Kaufmann & Wiering, 2017; Phillips et al., 2004, p. 645). In other words, we see that certain governance discourses are not even emerging but are held back (e.g. no ‘institutional’ discussion on the role of regional water authorities in the Netherlands), which stabilises the risk discourse, and vice versa, changes of the risk approach are held back with the effect of reproducing governance structures. What does this paper add to the existing literature on Dutch flood risk management? The development of flood risk management in the Netherlands has been widely analysed. However, most papers focus on specific policy concepts such as the emergence of ‘Room for the River’ (Huiteima & Meijerink, 2009; Roth & Warner, 2007; Van der Brugge et al., 2005), integrated water management (Van Herk et al., 2015; Wolsink, 2006) or the increasing integration of spatial planning and water management (Jong & van den Brink, 2013; Van Ruiten & Hartmann, 2016; Uittenbroek et al., 2013). The scholars who focus on analysing long historical developments (Van Heezik, 2006; Van de Ven, 2004), do not adopt a discursive-institutional perspective. Hence, this paper adds to the empirical literature on Dutch flood risk management by analysing specific developments from a long-term perspective. The establishment of Room for the River has often been termed the beginning of a more fundamental transition (e.g. Van der Brugge et al., 2005). However, this analysis has shown that we do not detect any ‘critical turns’ leading to fundamental transformations of the Dutch FRM approach, i.e. abolishing hydro-engineering defence structures. Despite dislocation events and important

emerging discourses, it appears that Dutch FRM is characterised largely by incremental institutional adaptations – with smaller accelerations and then slowing down again. This paper adds nuances to our understanding of dynamics in Dutch flood risk governance by distinguishing forms of merging, absorbing, layering, etc.; and instead of talking broadly about ‘change’ it systematically indicates in which dimension of the governance arrangement change actually takes place.

How can this stability be explained? The core of the Dutch governance arrangement –the hydro-technical approach– still stands strong and is in part strengthened because of its ability to avert, absorb or merge with competing discourses. It appears that a recurring stabilising effect is the pre-existing governance arrangement. Firstly, the arrangement distributes resources (legal, financial, expertise, network) therefore enabling or hindering the position of certain discourse coalitions influencing the discourse structuration processes. Secondly, the arrangement might be more or less susceptible to change. Mature institutions have been gradually reinforced and strengthened through path dependency mechanisms. The economic ‘lock-in’ created by decades of technical water infrastructure, combined with a set of institutional path dependencies: a strong specialised water centred knowledge domain, an organisational setting where national agency and regional water authorities have separate and autonomous resources and competencies combined with strong legitimacy because of a strong public narrative creating adaptive expectations among the general public, results in a stable governance arrangement (Kaufmann, 2017a; Wiering et al., 2018). Hence, the Dutch hydro-engineering governance arrangement is stoutly institutionalised and difficult to change. Whereas younger institutions might be less stoutly institutionalised and more susceptible to change (e.g. EIA).

5.2. Reflecting on change/stability

The research has shown that change/stability are not necessarily easy to distinguish. The analysis of change/stability is influenced by certain analytical choices. First, depending on the analytical time frame, the identification of change or stability may vary. Incremental changes or temporary changes might be bloated or lost in the analysis. Hence, a short-term view may tend to overestimate change, whereas long-term analysis may tend to ignore or reduce change. Second, there might formally be an institutional change, e.g. a new rule, while practical implementation of that rule is very limited. Hence, in practice, we might not see any changes. Third, governance *processes* might change, but the *substantial outcomes* of decision-making might remain the same. That means the FRM approach might be the same, but the decision-making processes leading up to it might have changed, which may have consequences for issues of legitimacy or procedural justice.

5.3. Further research

This continuum is a first reflection based on the analysis of one policy sector. It is not set-in-stone, but open for adjustment, improvement and change; and hopefully contributes to advancing the research on discursive-institutional interactions. Further research would be needed to apply this continuum to other societal transformations and their dynamics of change and stability, where perhaps more fundamental changes are to be found, e.g. the energy transition, the agricultural transformation or greening mobility. Do we see similar discursive-institutional interactions in (apparently) less path-dependent policy sectors? Additionally, future research could focus on systematically nuancing the conditions which influence the outcomes of discursive-institutional interactions. An interpretive approach does not allow us to quantify the influences of discourses on pre-existing governance arrangements. To further investigate this interaction, other more post-positivist approaches might be an additional step to advance the research on discursive-institutional interactions.

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