# Navigating frames

## A study of the interplay between meaning and power in policy deliberations over adaptation to climate change

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**Thesis**

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Somewhere between Zwolle and Groningen, on the train to yet another governmental meeting which we studied, my partner in crime Daan Boezeman and I discovered we both enjoyed Montessori education. A primary school type that in a way democratizes education. Children are allowed to choose the lessons that fit 'their state of development', which in a negative reading could become rather arbitrary. Daan used this reading of Montessori education as a metaphor for explaining to a group of civil servants how Dutch policy making employed scientific knowledge about climate change: 'pick and choose'. After which he praised his old Montessori teacher for having provided more authoritative guidance on the selection of knowledge than some of the Dutch governmental institutes seemed to get in their selection of knowledge. Roles, guidance and authority matter for getting the best out of democracy. My own Montessori education extended beyond primary education alone, an extension which only emphasized the importance of roles, guidance and authority for getting somewhere. At the Montessori high-school your 'state of development' was replaced by 'planning'. Learning goals became formalized and students' agency shifted to: what to do when, and how much. What at first sight seemed a clear track with strict goals and deadlines, in practice allowed for negotiation: my first experience with typical Dutch 'polderen'. Roles, guiding boundaries and authority were clear: school; teacher; pupil; parents; each representing clear interests. My education did not lead to 'pick and choose' but resulted in 6 years of constant negotiation on when to do how much of which learning. Some teachers ironically defined Montessori teaching as a career in negotiation rather than learning. I successfully finished high school, though planning through negotiation remained a cornerstone in my professional life. Doing a PhD can be seen as a prime example of that; a collective process in which planning becomes possible through a variety of roles, authorities and interests being involved. A variety of roles and interests lead to negotiation over planning, which then is likely to crystalize in concrete deadlines and shared ambitions. The combination of roles *constitute* the materialization of a planning process. Through interaction however, a combination of roles also *constitute* a learning process. These roles therefore represent inspiration, guideposts and sometimes more authoritative directions, for which -in the words of Daan Boezeman- I am still grateful. Without the people taking these roles I would never have been able to finalize a PhD thesis.

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## Contents

# Chapter 1

## General introduction

## 1.1 Navigating climate change: dead reckoning

When in the age of discovery European sailors set sail for new sea routes and unknown destinations, the perception of the world employed in navigating it was often far from how we understand the world today. Still, navigating was not unsuccessful: centuries of European consensus on the flat nature of the earth did not hinder sailors from roaming -the upper- half of it. If a journey was routine and the destination was known and nearby, navigating was a matter of keeping a close eye on the shore to monitor position and course. However, if horizons became hazy, or if destinations were more remote, sailors had to navigate offshore, which demanded a complex art of precise monitoring of course, speed, time, drift, and current. Combining each parameter resulted in a mathematical vector suggesting a position in relation to the ship's origin. This estimated position could be related to projections of reality, such as a drawing or notes made during previous journeys. Or this position could be plotted on more systemised projections, such as a map. Until coastal features like church towers or highlands were observed and recognised by the crew, sailors had to rely on this method of *dead reckoning* to know where they approximately were, and where they were presumably heading. In combination with notes and maps, the estimated position constructed a *perception* of reality, entailing possible dangers, options, and escape routes if the weather turned bad. When sailors ventured into the unknown and projections like maps and travel notes still had to be defined, dead reckoning was all there was in combination with ad hoc perceptions of how the reality ahead would look and what would be best to decide. Often, uncertainty and unexpected hardship, in combination with conflicting perceptions of reality and preferentiality, led to captains struggling with a crew threatening to mutiny.

Although uncertainty and new forms of hardship associated with the impacts of a changing climate have not yet led to societal mutiny, climate change does pose challenges to policymakers and society similar to captains and crew venturing into the unknown. Although the science and technology employed in understanding climate is well developed, interpreting where society stands in the process of climate change and what impacts society is facing is still -and probably will continue to be- a form of dead reckoning. Even when measured temperatures indicate substantial change, defining where society is heading at what speed, and especially what the societal consequences are of this journey into climate change, is largely a matter of constructing plausible claims plotted in an array of systemised projections ranging from sea level rise, to precipitation, severe weather events, international trade, migration, or the variability of natural species. Although different maps share similar features, plotting society's plausible position and course on the map of international trade in times of climate change yields a different picture than positioning society on the map of developments in flood safety, food availability, or freshwater demand. Different positions on different maps imply different societal threads or opportunities.

At the individual level, humans make sense of new phenomena or issues by plotting issues in mental projections or schemata which are shaped by past experiences. Comparable to the maps on which captains plot their position, or the projections used in modelling studies, individuals *frame* issues in mental schemata which determine what the issue means to the individual. This framing can be a

subconscious individual happening, but in a social environment is likely to become an interactive process in which people actively share and negotiate frames through the use of language (Entman 1993, Dewulf et al. 2009). Interactively, people plot new issues in a frame that they interactively construct, and accordingly issues get meaning. In a social context, frames appear as short storylines, metaphors, or simply sentences or phrases that say something about what 'is' and what 'ought to be'. Frames therefore guide a process of sensemaking by selecting, highlighting, and omitting items from reality and by classifying the situation at hand, implying a normative leap towards how reality should be. This makes frames and frame interactions guideposts in our thinking, knowing, and acting (Schön and Rein 1994). Whether climate change gets meaning and is acted upon as an issue of sea level rise facing society with the challenge of proactively adapting towards future high waters, or as an indicator of how human activity spoils our planet implying a conservatively framed need to reduce $CO_2$ emissions, is largely shaped by individual experiences and social interactions (Hulme 2009, Dewulf 2013).

In making sense of climate change, societies are different from ships with their clear hierarchical structures of captains making sense of positions, routes, and destinations and crews acting to captains' commands. Contrary to ships, most modern societies consist of decision-making structures in which societal plurality is somehow reflected and sensemaking on nations' behalf becomes a collective process. Similar to captains' concerns about mutiny, modern governments face the risk of societal opposition when they decide to take unpalatable measures now to reach uncertain goals in the future. Plurality in society feeds ambiguity in the collective understanding of what climate change means, what goals are preferable and, accordingly, what different publics consider legitimate in terms of governmental action. This makes climate change a wicked problem. Wickedness here does not refer to witchcraft or evilness but rather to a policy problem in a meaning akin to malignant, vicious, tricky, or aggressive (Rittel and Webber 1972). In contrast to the logic of rational problem solving, where problems are definable, understandable, and therefore solvable, wicked problems show a history of restive clients or publics. Different publics assign different meanings to the issue, and this plurality of publics and associated problem definitions or frames make it difficult for policymakers to define what is at stake and what should be done. Determining where government and governmental action are heading as a journey into society therefore becomes a matter of precise monitoring of governmental course, speed, drift, and societal currents. Hence, organising the policymaking process and implementing policies in relation to wicked problems could in itself be classified as dead reckoning.

As some scholars claim, the long-term character of climate change and the still little institutionalised policy field of societal adaptation to climate change make this adaptation a *wicked problem par excellence* (Rittel and Webber 1972, Lazarus 2008, Davoudi et al. 2009, Jordan et al. 2010). The ebbs and flows in media and policy attention on anthropogenic climate change after movies like *An Inconvenient Truth* in 2006 and the devastating effects of Hurricane Katrina in 2005, followed by controversies in societal debate after the revealing of presumed scientific fraud and errors in the 2007 IPCC report, make the wickedness all the more visible (Boykoff 2012, Vink et al. 2012). In this thesis, I focus on how the process of governing societal adaptation to a changing climate is

shaped by frames and frame interactions that give meaning to the climate issue, and accordingly *do* something with the issue and have consequences for how climate adaptation is dealt with as a policy issue. I do so by conceptualising the metaphor of dead reckoning as the scientific question of how policymakers and societal actors collectively deal with wicked problems that are characterised by uncertainty, long-term consequences, and societal ambiguity over what 'is' and what 'ought to be'.

This study employs theory on framing and frame differences to describe this constructivist nature of wicked problems, which I subsequently further by introducing theory on frame interactions to describe the governance process in which a plurality of public and private actors interactively *puzzle* over meaning and *power* to get things done. In six empirical chapters, I elaborate on four case studies where public and private actors actually make sense of the climate adaptation issue. I draw conclusions on how frames and frame interactions affect the interplay between processes of puzzling and powering, and how different institutional arrangements in different state traditions interrelate with patterns of frame interaction. I finally discuss how different configurations of state tradition, institutional arrangements, and frame interactions might lead to different substantial and relational outcomes and result in controversy, apathy, or action.

## 1.2 Theoretical framework

In academics and beyond, navigating societal problems is referred to as a form of *governing* (Rhodes 1996, Pierre and Peters 2000, Kersbergen and Waarden 2004). Although the concept of governance is imprecise in how it is used in a range of disciplines and academic debates, it may generally refer to a form of social organisation to manage collective action problems (Ostrom 1990, Rhodes 1996). In academic terms, steering a ship therefore is a rather centralised form of governance, where hierarchy is fundamental in decision making and clear physical boundaries determine who is '*on board*' the governed collective, and who is not. Although history shows an array of drama in captains struggling with defiant crew, modern plural societies are generally more complex to govern in terms of size, plurality, and their more nuanced -often less hierarchical and more democratic- governing mechanisms. Whether governance is about state-centred bureaucratic steering, collaborative forms of governance, or market-based arrangements for dealing with societal problems, collective sensemaking through frame interactions is fundamental in these more collective forms of governance (Weick et al. 2010). Who is included in, or excluded from, collective sensemaking, and what this sensemaking is doing for which part of society, are largely determined by the institutional arrangements embedding frame interactions and setting the rules of what can be defined as a -framing- game. At the same time, the *framing game* may be about the rules of the game itself and affect how the framing game that governance generally entails is played out (North 1990, Termeer 1993, Schön and Rein 1994, Sabatier 2007, Mahoney and Thelen 2010).

### *1.2.1 Frames and frame interactions*

The concept of framing is widely used by scholars in various disciplines (Entman 1993, Dewulf et al. 2009). Originally, the concept was approached from psychology in which frames are similar to cognitive schemata helping humans to interpret new events and make decisions on the basis of earlier experiences (Bartlett 1932, Minsky 1974, Tversky and Kahneman 1981). In more social-psychological fields of research, frames are defined as interactive forms of meta communication that imply subtle clues which actors share in interaction and through which actors collectively make sense of ambiguous social situations. In this interactive form of sensemaking, frames are communicated through the possibilities and restrictions of language and play a large role in social daily live, but also in policymaking processes like administrative meetings or parliamentary debates where policy actors collectively make sense of societal issues on society's behalf (Goffman 1983, Schön and Rein 1994, Dewulf et al. 2009). In these interactive processes, frames are considered a linguistic way '*... of selecting, organising, interpreting and making sense of a complex reality to provide guideposts for knowing, analysing, persuading and acting*' (Schön and Rein 1994: pp146). As preluded in the introduction section, frames come as short storylines or metaphors making an ontological claim of what 'is' and explicitly or implicitly referring to a normative leap between what is and what 'ought to be'.

Theory on frame interaction therefore shows that meaning-making is a process which takes place not only between the ears, but also between the noses (Dewulf et al. 2009). As Dewulf et al. (2011) summarise, in processes of interactive meaning-making, distinctions can be made about the issues that are framed, and the identities or interaction patterns themselves. Others have referred to concrete problems or scales that get framed (Hisschemöller and Hoppe 1995, van Lieshout et al. 2011). The literature on conflict resolution and social learning refers to processes of reframing as a matter of finding common ground when these issues, problems, and scales lead to conflict and controversy (Putnam 1986, Lewicki 2002, Gray 2005, Moore 2014). In general, we may conclude that scholars distinguish between a wide array of issues that can be framed and reframed and which, because of the normative leap embedded in a frame, all imply a problematic reality to the issues and point towards corresponding solutions. Hence, what framing theory shows us is that problems and solutions indissolubly travel together, connected through language.

Apart from issues, identities or problems which can be framed, Dewulf et al. (2011) highlight an ontological distinction in approaches to framing as well. They distinguish between frames as mere linguistic instruments for representing the world, and frames as strategic devices for *accomplishing* something in a social context. The latter would imply that frames and frame interactions are a matter of agency, with frames strategically employed in a play over power to get things done.

This more sceptical approach to the use of language in which frames are considered strategic devices, touches upon the adjacent field of critical discourse analysis. In a theoretically dense fashion critical discourse theory attempts to illuminate how societal sensemaking in the form of societal discourse or language results in specific manifestations of (state) power. Discourse theory centres on the ontological notion that the use of language is essentially a cover for deeper forms of power play.

In this vein, discourse theory is considered *critical* towards language employed in reconfirming hegemonic power, as extensively dealt with by authors like Fairclough (2013) and Laclau and Moufe (2001). In the post-structuralist Foucauldian terms underpinning this contemporary critical discourse analysis, the role of societal discourse and its authorisation of truth and state power are referred to as a form of governmentality. The study of governmentality unpeels practices and policies through systemised and largely prescribed interpretations of societal language to claim underlying ideological struggles, usually in the context of emerging state governance, but increasingly beyond (Wagenaar 2011).

Theory of frame interactions and critical discourse analysis are part of a larger movement in policy studies referred to as the Discursive Turn, which developed as a scholarly movement in interpreting policy formation and manifestation through its use of language. In this thesis, my conceptualisation of policy processes generally fits the linguistic approach of the Discursive Turn. In terms of my ontological position on what language as such entails in these processes, I find inspiration in the conceptualisation of language and its structuring effect on power and ideological struggles as commonly adopted in critical discourse analysis and its predecessor; however, I depart from critical discourse analysis and post-structuralist views on language because of the little room these critical approaches leave for individual agency. Or as Wagenaar (2011) points out, after Bevir (1999), critical discourse approaches are about how society makes the subject, and less about how the subject makes society.

To theoretically understand what agents do in practice in governing society, how meaning gets constructed through ad hoc on-the-spot frame interactions, and how this shapes agents action and inaction in a larger policy context, I follow Alvesson and Kärreman (2000) in their *discursive pragmatism* approach to the study of language in an organisational context. Although Alvesson and Kärreman recognise that language is more than a mere mirroring of cognitive representations of reality, they do not hold ontological standpoints that imply power and ideological struggle as fundamental to the use of language. In a plea for modest claims in data interpretation, they stress the importance of acknowledging the multiplicity of possible meanings. Only when data are carefully collected and analysed can strong claims be made about the reality at hand, and maybe beyond. In its more moderate theoretical density compared to critical discourse approaches, I consider discursive pragmatism similar to the frame analysis approach adopted by Schön and Rein (1994) in their careful and empirically rich investigation into the nature of policy controversy.

In following Alvesson and Kärreman's approach to the meaning of language in the broader societal context. I adopt the role of frames in this use of language as employed by authors like Schön and Rein (1994), Yanow (1996), and Dewulf and Bouwen (2012). Therefore I adopt an ontology to frames in governance processes that leaves room for interpreting the use of language as both mere cognitive representation and as a strategic tool for accomplishing things, implying agency. In that sense, I adopt a multiplicity of possible meanings: if one wants to understand what frames do in terms of positioning and influencing, it is not necessary to distinguish between mere cognition and strategic intentions to understand this process. Empirically observing how a frame is posed, what

it does in the discussion, how it vanishes, dominates, polarises, or evolves into a hybrid framing, is essentially enough to draw conclusions on the role of framing in policy processes and how wittingly or unwittingly frames change substantive policy outcomes and relational positions. Whether intentionally or not, frame interactions do things in policy processes.

### *1.2.2 Making sense of climate change: a matter of framing*

In the emerging field of climate change studies, scholars have only recently started theorising about the role of framing and frame interactions in societal controversy and corresponding policy action and inaction (Pidgeon et al. 2008, Hulme 2009, Termeer et al. 2011, Dewulf 2013, Vink et al. 2013, Biesbroek et al. 2014). In media studies however, the framing of climate change is approached from a communicative perspective which highlights developments and trends in the media frames rather than the frame interactions and frame conflicts in societal discourse or policy processes (Antilla 2005, Carvalho and Burgess 2005, Boykoff and Boykoff 2007). This corresponds with studies in political science and social movement studies where political attention on, and the public perception of, climate change is understood as being affected by these media messages (Giddens 2009, Nisbet 2009), in which some authors consider framing a matter of 'manipulating' information (Spence and Pidgeon 2010). Scholars as well as governmental and non-governmental organisations employ this communicative approach to framing in a prescriptive way, suggesting that framing can be used by policymakers and scientists to increase public awareness of the issue and the legitimacy of policy interventions (Moser 2010, Fünfgeld and McEvoy 2011, Morton et al. 2011, Bain et al. 2012, Trenberth 2012).

Limited research has been conducted, however, that empirically discovers the precise frame developments in social interactions that shape the policymaking processes over the climate issue and yield concrete policy outcomes, conflicts, or apathy (Vink et al. 2013). Therefore, I depart from the communicative and prescriptive approaches to framing in climate governance studies and follow Schön and Rein (1994) in their policy-centred approach. Schön and Rein empirically approach frames as linguistic tools in an on-going policy debate between different policy actors. To understand how sensemaking leads to policy controversy, apathy, or action, I further Schön and Rein's approach by employing frame interaction theory (Goffman 1983, Dewulf et al. 2009, Dewulf and Bouwen 2012). The uncertain nature of policy results and the long term over which these results will materialise make these frame interaction processes in contemporary policy debates over climate change all the more interesting.

### *1.2.3 Adapting to climate change: uncertain futures, plural societies, wicked problems*

Although climate has been changing throughout planetary history, the steep rise in atmospheric $CO_2$ concentrations over the last centuries have made scientists expect more abrupt changes in climate, which most certainly will lead to global warming and increased weather extremes, both

in number and magnitude, depending on geographical location. Some impacts of anthropogenic climate change are claimed to be already visible (Parmesan and Yohe 2003, Füssel 2009). However, most impacts are to be expected in the future (Solomon 2007, Rockström et al. 2009).

Initially, debates about tackling anthropogenic climate change centred on the reduction of $CO_2$ emissions, and voices suggesting adaptation measures to withstand the impacts of climate change were disregarded as defeatists, fatalists, and were associated with apathy, thereby limiting the scientific and political discussion for a long time to climate change as a global mitigation issue (Tol 2005, Schipper 2006, Klein et al. 2007, Biesbroek et al. 2009). With climate change impacts becoming visible however, and with a continuing rise in $CO_2$ emissions, scholars increasingly recognised that mitigation strategies alone would not be sufficient to prevent serious societal impact. From the early 2000s onwards, this recognition legitimised growing attention on societal adaptation to climate change impacts and resulted in a deliberate and self-conscious focus on adaptation strategies in policy processes (Adger et al. 2009). The intentionality and substantiality of this focus make the concept of societal adaptation to climate change distinct from genuine adaptation to changing circumstances as societies have done throughout history, and accordingly has opened up a new, still little institutionalised, field of research and policy deliberation (Dupuis and Biesbroek 2013).

Despite the recent rise in scientific attention, nation states have not unconditionally implemented climate adaptation policies (Repetto 2008, Biesbroek et al. 2010, Keskitalo 2010, Berrang-Ford et al. 2011, Ford and Berrang-Ford 2011, Wolf 2011). One reason might be the intrinsic uncertainty involved in understanding the distant future which leaves room for different understandings of where society stands and is heading. In addition to this intrinsic uncertainty, the ambiguity in climate adaptation policies might partly originate from the scientific nature of the climate issue itself. If science had not revealed that $CO_2$ concentrations were on a steep rise and might possibly affect global temperatures, one might question whether both the intentionality and the substantiality that define current climate adaptation activities would have come about at all (Dupuis and Biesbroek 2013). This means that the origin of the climate problem as used in most literature and policy documents ultimately refers back to an abstract scientific construct framed in global terms after the global climate modelling methods that signalled the issue in the first place (Hulme and Dessai 2008). Translating the scientifically constructed climate issue into more locally framed and societally graspable problems therefore in itself suffers interpretation problems. Interpretation problems range from translating abstract levels of uncertainty and risk into societally relevant meaning, to allocating and legitimising concrete measures, benefits, and costs throughout society. Nations' policy practises that deviate from scientific pleas might therefore not only originate in uncertainty, but also point towards an epistemologically 'distant' understanding of climate change as an abstract scientific field of study vis-à-vis ordinary societal sensemaking (Eden 1996, Carolan 2004, Hulme and Dessai 2008, Von Storch 2009, Swyngedouw 2011).

This gap between the epistemologically distant worlds of science and society has yielded a field of research in its own right, occupied with studying the boundaries between those worlds, and the organisations, actors, and objects that demarcate and connect these worlds (Cash et al. 2003, Guston

2005, Lentsch and Weingart 2011). Correspondingly, to understand how society governs climate change, this *boundary work* might play a special role. Understanding boundary work practices might shed light on the production of what can be considered important input for societal sensemaking and acting. Opening up the black box of how boundary actors make sense of the climate issue in concrete examples of boundary organisations that are occupied with the climate issue therefore becomes an interesting issue of study, as well as how society makes sense of the translations that boundary organisations produce, and vice versa. Scientifically credible climate knowledge does not guarantee legitimate societal translations, and society is not a single actor that can easily be consulted by boundary organisations to verify the saliency of its translations. In modern plural societies where governance is more than hierarchically navigating a ship, societal plurality results in a wide array of frames and framing processes that give meaning not only to knowledge produced by boundary organisations, but also for example to boundary organisations themselves, as the 2007 example of the IPCC errors and the controversy that followed over IPCC itself point out.

Hisschemöller and Hoppe (2011) define these kinds of problems after Simon (1977) as *ill-structured*, where both societal values and scientific facts suffer from ambiguity. Research has indicated how these ill-structured problems result in persistent societal problems prone to conflict and controversy (Koppenjan and Klijn 2004). In terms of governing these ill-structured problems, this is where the organisation of the governance process becomes a form of dead reckoning, and the problem is not so much finding the right solution to a problem, or working towards more certainty, but more so the framing of the problem in coherence with surrounding societal understandings, which are prone to change. If a policy actor defines the problem differently from societal understandings of the problem, Hisschemöller and Hoppe (2011) identify a *problem-problem* which usually leads to conflict and controversy.

In addition to scientific uncertainty and ambiguous understandings, societal adaptation to climate change specifically touches upon a time dimension. Its long-term character implies multiple policy cycles before climate change impacts materialise and before the effects of adaptation measures can be evaluated. In political terms, its long-term character makes climate adaptation not an issue with which politically elected decision makers are likely to identify to ensure four-yearly successes. In addition, the configurations of societal frames about climate change are likely to change over time: if a majority in society accepts policy interventions now to tackle uncertain adaptation challenges in the future, new knowledge or events that emerge in the meantime might change societal sensemaking and therefore lead to an unexpected rise in problem-problems. Therefore, the time dimension turns the uncertainty and ambiguity of the ill-structured problem into a typical wicked problem, which is defined by Rittel and Webber as unsolvable (Rittel and Webber 1972). Wicked problems can at most be solved for some people for some time, and demand constant monitoring, reconsideration, and resolution (Rittel and Webber 1972, Termeer et al. 2013b, Van Buuren et al. 2014).

The definition of a wicked problem raises the question of whether in plural societies all societal problems, which involve some form of abstract knowledge, societal frame differences, and a time leap between policy implementation and its effects, are not in the end varieties of a wicked problem.

Most societal problems entail some degree of wickedness, but for a majority of issues, like postal services, road maintenance, violence, or the legal system as a whole, both the knowledge base and societal sensemaking can be considered generally consensual and constant. Accordingly, in modern societies, most of these issues are institutionalised in governmental organisations, policies, and law, and allow for managerial or technical problem solving through rational planning. If this technical problem solving is applied to more pronounced wicked problems however, societal frame differences may lead to unexpected societal conflict and policy controversy in which frames polarise and new knowledge is interpreted in terms of the dominant frames (Dewulf 2013).

Although in some specific cases adaptation to climate change might be a rather managerial or *tame* problem -like in the case of slight adjustments in on-going maintenance of water management structures, or the introduction of floating houses instead of normal houses- the intentionality and substantiality of current societal adaptation activities and the still weakly institutionalised context of climate adaptation make the issue wicked (Dupuis and Biesbroek 2013, Biesbroek 2014).

### *1.2.4 Governing adaptation to climate change: puzzling over meaning and powering over positions*

In this wicked context, neither the traditional technocratic view of policymaking, where the 'best' policy option can be derived from proper calculation and modelling, nor a more political perspective on policymaking, where stakeholders negotiate over their interests on the basis of rational micro-economic thinking, are applicable (Schön and Rein 1994). Or as Majone (1996) states, neither interests and power, nor the search for the best ideas or solutions, fully determine the policymaking process. In cases where policy problems represent issues of resource distribution, the process of policy formulation is generally defined as power organisation over interests, but, when policy problems are represented as efficiency issues, a more technocratic way of policymaking is usually adopted, where professionals develop ideas on how to reach the highest efficiency. However, as Majone (1996) also points out, this distinction is not clear-cut: there are usually winners and losers when efficiency measures are implemented, and compelling ideas will be necessary to organise power.

An interesting way of conceptualising policymaking over wicked problems might be what Heclo (1974) and Hall (1993) call a process of both 'puzzling and powering'. In this classical definition of policymaking, the authors define the policy process as a matter of policy actors collectively 'puzzling' over ideas and concepts to come up with plausible storylines and solutions, and organising enough 'power' to get things done. Policy formation is more than a power play over interests, but also more than a process of Habermasian dialogue between policymakers and advisory councils, committees, or independent experts over what the best policy option is. Although Heclo derives his idea from a study of welfare state reform in different state traditions (Heclo 1974, Dyson 1980), I consider his notions useful for understanding the formation of climate adaptation policy. On a general level, both welfare state reform and climate adaptation governance are processes of societal adaptation to

an emerging new reality, demanding collective sensemaking and policy action.

### *1.2.5 Operationalising the puzzling and powering interplay: frame interactions*

Puzzling and powering are not separate processes. As Heclo (1974) and others have highlighted, powering cannot be done without defining what is at stake and formulating plausible storylines, and therefore involves puzzling. Conversely, in the process of puzzling, actors define what is at stake, what is relevant, or what geographical or administrative scale is addressed, and therefore what the priorities are, who the problem owners are, and what knowledge is most relevant. In a more recent study on welfare state reform, Culpepper (2002) defines the outcome of this interplay as 'pacting', in which the collective puzzling process yields shared problem definitions that pact into potentially powerful coalitions. By puzzling, actors implicitly position knowledge, roles, and actors by defining what is at stake, and therefore shape relational power positions. Puzzling and powering are interplaying processes: by puzzling, actors power, and, by powering, actors puzzle. Or actors might actively puzzle to power, or actively power to puzzle.

In puzzling over what is at stake, sensemaking through frame interactions obviously plays an important role. In concrete policy processes however, this meaning is not without consequences. Frame interactions between agents that create shared or opposing meanings influence relational positions and associations. By making sense through frame interactions, actors therefore implicitly or otherwise alter power relations. And by organising support or building coalitions, actors alter the actor configuration and therefore reshape the meaning-making process over the issue at stake. Consciously or unconsciously, framing and frame interactions can be used as tools for including, excluding, emphasising, or downplaying issues, processes, relations, or identities in a process of negotiating shared meaning (Entman 1993, Benford and Snow 2000, van den Brink 2009, Dewulf and Bouwen 2012). Frame interactions affect both the substantial outcomes of a governance process and the relational outcomes, and may ultimately lead to a concrete pact between different actors, implying durable policy change. Or in other words: in policy deliberations, puzzling and powering are interplaying processes, of which an important part can be captured with theory on frame interactions.

My concept of powering in the relational context of policy deliberations closely resembles an active version of the power concept as described by Giddens (1984) and Arts and Tatenhove (2004), where agents have the capacity to accomplish things in social practices. I define powering as the activity of organising actors' positions and relations in a larger social context, resulting in what Arts and Tatenhove define as relational power. I follow Arts and Tatenhove in considering also a more structural side to power. It is not only deliberation that determines achievements; access to resources, and regulations or routines, can also be used to change things -against the will of others if deliberation will not work. Torfing defines this two-sided nature of power after Derrida and Foucault as both *structure* and *agency*, which are constructed through the play of meaning (Torfing 2009). Although power's structural side is constructed by meaning crystallised in societal discourse

and corresponding institutional arrangements rather than individual frames, Torfing's definition clearly highlights how agents puzzling over meaning theoretically cannot be viewed without the intertwined process of powering. Hence, in the classical definition of policymaking as interplaying processes of puzzling and powering, I consider agents' meaning-making central, which can be captured by mapping agents' frame interactions.

### *1.2.6 Understanding frame interactions in context: puzzling and powering in different institutional arrangements*

Puzzling and powering over adaptation to climate change is not a standalone activity but touches upon other policy fields, societal issues, and scientific disciplines. Climate adaptation policymaking is likely to be embedded in existing institutional arrangements like rules, regulations, organisation, and underlying traditions of values, norms, and interaction patterns (North 1990, Mahoney and Thelen 2010).

Coherent sets of these institutions, or what Howlett (2009) defines as policy regimes, determine the rules and boundaries in which frame interactions take place. How frame interactions between policy actors like administrators, political representation, organised societal interests, and individual stakeholders are embedded in existing policy regimes touches upon how the state is traditionally organised. Traditions of state organisation vary in their institutionalisation of dependencies, or systems of *interest intermediation* between society and the state. Institutional arrangements and policy regimes might mirror state traditions (Schmitter 1974, Dyson 1980, Wilson 1983, Koppenjan and Klijn 2004, Howlett 2009).

Despite these policymaking structures, the wicked characteristics of the climate issue, in combination with more general contemporary concerns about fragmentation of societal representation in policymaking, have sparked pleas for more ad hoc deliberative forms of governing that go beyond organised societal representation and the state (Dijstelbloem et al. 2010, Hajer 2011, Raad voor Maatschappelijke Ontwikkeling 2013, Rayner 2015). Empirically, these more *decentred* forms of governance deliberations have been observed as a shift from institution-centred and government-centred hierarchical policymaking towards policymaking which takes place in informal networks of public and private actors acting on the fringes of the institutions rather than in the centre (Rhodes 1996). In terms of adaptation to climate change, more decentred deliberative forms of governance are claimed to accommodate a wider array of societal frames, solving the *problem-problem* associated with centralised decision making over wicked problems in plural societies (Hisschemöller and Hoppe 1995, Adger 2001, Few et al. 2007, Urwin and Jordan 2008, Ford et al. 2013, Termeer et al. 2013a, Termeer et al. 2013b).

Despite the wide array of governance labels coming with the increasing attention being paid to governance, the concept still does not fit a generally accepted theory of cause and effect in policy sciences, and, according to Rhodes, the concept remains imprecise (Rhodes 1996, Jessop 1998, Stoker 1998). I define horizontally organised ad hoc governance deliberations after Dryzek (2010)

as *deliberative governance*, as most of these governance labels share a principle of policymaking through deliberation which goes beyond state institutions but ultimately aims at governing a public good. The participatory, semi-open bottom-up character of these often ad hoc organised deliberative governance initiatives is believed to improve the legitimacy and effectiveness of policymaking (Goldsmith and Eggers 2004, Klijn et al. 2010, Dryzek 2010, Sørensen and Torfing 2011, Termeer et al. 2013b).

There is an on-going debate, however, on the actual effects of deliberative governance initiatives on public policy issues and whether deliberative governance lives up to its promises for society. Although the focus on deliberations in deliberative governance aims to value the variety of problem frames regarding a particular policy issue, Van Eeten (2001) indicates that deliberative forms of governance can also lead to such a wide array of frames that public officials find it difficult to translate this into action, resulting in a selective choice of a restricted number of (vested) interests. Stoker (1998) and Rhodes (1996) highlight a possible lack of transparency about state involvement in what they define as decentred governance deliberations between individual state and non-state actors, and Jessop (1998) highlights the privileged position this creates for the state in governance processes. Others question the neoliberal market mechanisms assumed in deliberative governance approaches (Moravcsik 2002, Ranson 2003, Swyngedouw 2005, Catlaw and Sandberg 2012). The problem with most of the claims, however, is, as Sorenson and Torfing (2011) point out, that only few studies have attempted to empirically unravel the actual processes of policy formulation and policy implementation through deliberative forms of governance.

New forms of deliberative governance create new and -as claimed by some scholars- blurred interaction patterns. The limited understanding of the actual policy formulation in deliberative governance therefore makes understanding and comparing policymaking processes in terms of puzzling and powering all the more interesting. Proposing deliberative governance to deal with the wicked characteristics of climate adaptation cannot stand in isolation but touches upon existing policy fields, regimes, and state traditions (Howlett 2009, Massey and Huitema 2013, Biesbroek 2014). Empirically understanding and comparing processes of climate adaptation governance and their outcomes is therefore interesting, especially in view of the long-term nature of the issue, the novel, little institutionalised policy field, and the controversies and broader frame conflicts over the climate issue observed in society. If governing climate adaptation in general is about puzzling and powering, differently worked out in different institutional arrangements, frame interaction theory might be an interesting cross-cutting piece of theory for understanding these different processes, their interplay, and their outcomes in different institutional contexts.

## 1.3 Research problem, questions, and key concepts

### *1.3.1 Research problem*

The theoretical notions discussed in the previous section can be summarised in the following

problem statement: societal adaptation to climate change is a contemporary example of long-term policy challenges, characterised by uncertain, scientifically constructed knowledge (Hulme and Dessai 2008). In plural societies, this abstract knowledge gets meaning through frames and frame interactions, thereby making the issue a wicked issue (Rittel and Webber 1974, Hulme 2009, Termeer 2011, Dewulf 2013). Policy sciences, however, show a history of understanding policymaking over these complex issues as rather institutionalised interplaying processes of puzzling over meaning and powering over positions to get things done (Heclo 1974). This would suggest that actor-centred frame interactions are not standalone activities, but should be viewed in the context of institutional arrangements and the tradition of state organisation (Sabatier 2007, Howlett 2009, Painter and Peters 2010, Dewulf and Bouwen 2012). These institutional arrangements would set the rules and boundaries of frame interactions, which in turn would shape the classically defined puzzling and powering interplay.

The still little institutionalised character of the climate adaptation policy field, the long-term character of adaptation policies, and the associated societal controversy make frame interactions in climate adaptation governance an interesting topic for understanding policy outcomes. To overcome societal frame conflicts and policy deadlocks, the scientific literature on adaptation to climate change claims a need for deliberative forms of governance, which go beyond institutions and the state (Adger 2001, Urwin and Jordan 2008, Termeer et al. 2011). The novel ad hoc character of deliberative governance, the scholarly doubts about its effects, and recent societal controversy over the climate issue make understanding frame interactions as forms of puzzling and powering in different institutional arrangements occupied with governing climate adaptation all the more interesting.

### *1.3.2 Research questions*

Following the research problem with which this section started, the main research question of my thesis is as follows: *In what way do frame interactions construct interplaying processes of puzzling over meaning and powering over positions in different institutional arrangements occupied with governing societal adaptation to climate change?*

To systematically answer this central question, I defined three sub-questions:

1. What frames can be observed in relation to governing societal adaptation to climate change?
2. In what way does the interplay between puzzling and powering through frame interactions lead to substantial and relational policy outcomes in governing societal adaptation to climate change?
3. How do different institutional arrangements influence processes and outcomes of puzzling and powering through frame interactions in governing societal adaptation to climate change?

### *1.3.3 Key concepts*

To develop an in-depth empirical understanding of frame interactions in different institutional arrangements and to answer my research question, I actively make use of the following scholarly concepts distilled from my theoretical framework elaborated above.

#### *1.3.3.1 Governance of adaptation to climate change*

With climate change impacts becoming visible, scholars are increasingly recognising that mitigation strategies alone will not be sufficient to prevent serious societal impact. From the early 2000s onwards, this recognition legitimised the growing attention on societal *adaptation* to climate change impacts and resulted in a deliberate focus on adaptation strategies. The uncertain knowledge and the plurality of societal understandings or frames associated with the climate issue pose the challenge of governing societal adaptation to climate change. In modern societies, similar long-term complex problems generally used to be governed through hierarchically organised government organisations. However, in recent decades there has been a trend towards society players and the market becoming involved in governing these complex public issues. This has resulted in more horizontal processes of "*self-organising interorganisational networks*" which can be defined as governance (Rhodes 1996: 666). Although imprecise, I employ the concept of governance and governance arrangements to capture the collective actions that go beyond state involvement alone.

#### *1.3.3.2 Frames and frame interactions*

I understand frames as interactively constructed guideposts that help people make sense of, and act upon, ambiguous issues like climate change impacts and adaptation. In this interactive form of sensemaking, frames are communicated through the possibilities and restrictions of language and often come as metaphors or short storylines implying ontological claims over what 'is' and implying normative standpoint towards this reality of what 'ought to be'. Frames are considered to play a large role in social daily life, but also in governance processes like stakeholder consultations, administrative meetings, or parliamentary debates where policy actors collectively make sense of societal issues by interactively framing issues through selecting, highlighting, downplaying, or omitting issues through the use of language (Goffman 1983, Schön and Rein 1994, Dewulf et al. 2009).

#### *1.3.3.3 Puzzling and powering*

To make sense of what frames and frame interactions do in governance processes, I turn to Heclo (1974) and his classical definition of policymaking as interplaying processes of puzzling over complex and ambiguously understood realities, and organising power to get things done. Hence, I consider policy formation more than mere power play over interests, but also more than a process

of Habermasian (1968) dialogue and learning. In line with Hoppe's (2011) contribution to Heclo's work, I propose actor participation an important factor in how puzzling and powering plays out. Correspondingly, I propose that the interplay between puzzling and powering is largely constructed through the frame interactions by the participating actors. Puzzling and powering may lead to processes of pacting (Culpepper 2002), yielding intermediate policy outcomes involving new configurations of policy substance and relational positions. Likewise, puzzling and powering may lead to apathy or controversy, which may hamper policy action.

#### *1.3.3.4 Institutional arrangements*

Frame interactions over adaptation to climate change are not standalone activities but touch upon existing policy fields, societal issues, and scientific disciplines. Frame interactions in governing climate adaptation are likely to be embedded in existing policymaking organisations, rules, regulations, and routines (North 1990, Mahoney and Thelen 2010). Compared to the rather general concept of governance arrangements, *institutional arrangements* determine the rules of the game in which frame interactions take place. I therefore employ these institutional arrangements as the boundaries of the case studies within which I investigate frames and frame interactions. Policy fields like water management occupied with climate adaptation may be characterised by coherent sets of institutions sharing traditions of norms, interaction patterns, and underlying values served, which construct a specific policy regime (Howlett 2009). At national level, institutional arrangements and policy regimes are -to a certain extent- likely to mirror more general traditions in state organisation. At cross-national level, state traditions vary in their institutionalisation of dependencies between society and the state and administrative organisation (Schmitter 1974, Dyson 1980, Wilson 1983, Koppenjan and Klijn 2004, Howlett 2009, Painter and Peters 2010). I therefore employ the concept of state traditions to investigate how novel institutional arrangements -for example deliberative governance initiatives- fit traditions in state organisation and what a possible (mis)fit might imply for frame interaction processes and their outcomes. My conceptual position is visualised in figure 1.1.

## 1.4 Research approach

I approached my research question in a qualitative manner to gain in-depth understanding of how frame interactions construct the interplaying processes of puzzling and powering in the context of different policy regimes, state traditions, and deliberative governance initiatives at different governmental layers of concern. In order to answer the research questions, I adopted a social constructivist discursive ontology, which implies a socially defined nature of reality. A social constructivist discursive ontology explains my focus on social interaction through language as the process which defines what is considered 'real' and determines (policy) action. If the case studies allowed, I applied this lens in a cross-national and cross-sectional or longitudinal fashion

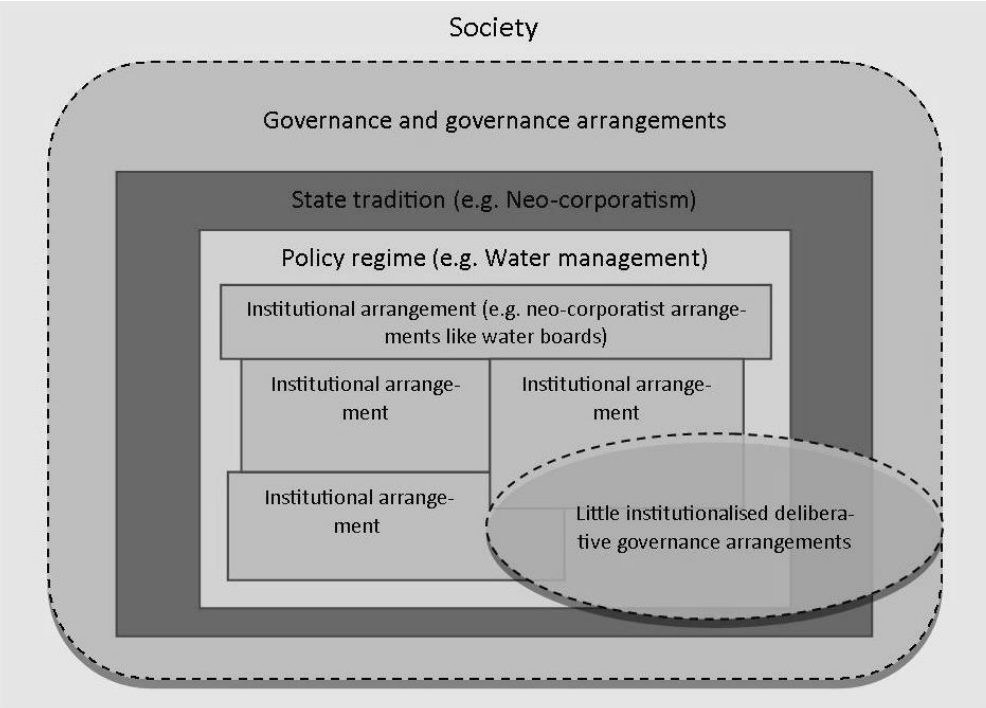



**Figure 1.1 Conceptual position of governance and governance arrangements, more specifically distinguished as state traditions, policy regimes, and institutional arrangements**

(Gerring 2004, Philips and Hardy 2002). I focused on the textual interactions of climate adaptation governance deliberations, in which the meanings of issues, relations, problems, and scales were studied as socially constructed, both in terms of speech and written text.

As highlighted in my theoretical framework, the focus on the socially constructed nature of things does not mean I disregarded the institutional context as an important entity in understanding the process of frame interactions in climate adaptation governance. I employ my inspiration from more critical and realist approaches to policymaking by considering the institutions, policy regimes, and state traditions as 'rule setting' and therefore as important, partly independent, entities for how the framing game is played out. In addition to the social constructivist focus on policy deliberations, I made institutions, policy regimes, and state traditions part of my analysis as more realistic entities which -at least partly- go beyond deliberations. For practical reasons, I consider these rule-setting entities comparable to the physical reality of the water or climate system which cannot be changed by instant deliberations but are the context with which deliberations have to deal. However, I did not lose sight of the ultimately socially constructed nature of institutions, regulations, and tradition, especially in how these rule-setting entities were employed in the frame interactions, and were made sense of. The same goes for the socially constructed nature of how the physical systems of water and climate are conceived and acted upon in policy deliberations.

Given both the context-dependent nature of climate adaptation governance practices, and the relevance of theoretical concepts discussed in the precious section, I followed Yanow (2010) and Geertz (1973) in their plea for *abduction* instead of deduction and induction. Although I started from theory-laden concepts with which I built my theoretical framework of how I expected climate adaptation governance to be, my analysis of the data at least partly took place as an iteration with this theoretical framework, allowing for theoretical adjustments when my findings required. This yielded an in-depth and open-minded data analysis, such that my theoretical framework developed on the way.

To map the scholarly approaches to climate adaptation governance, I applied my constructivist approach in a more systematic and partly quantitative fashion. Modern scientific databases like Scopus, and the systemic data collection techniques for which these databases allow, enabled me to systematically assess the climate adaptation governance literature's approaches to governing adaptation to climate change.

## 1.5 Research design

In this section, I discuss the rationale behind the research design; why I chose frame analysis in relation to comparative case study research, how I selected the four cases studied, and how I did cross-case and cross-national comparison. The research design is summarised in figure 1.2.

### *1.5.1 Comparative case study research*

The complex ontology and societally distant epistemology that characterise the climate adaptation issue, and the complex unique governance processes this implies in different societal contexts, made me choose explorative case study research to get an in-depth understanding of these governance processes. Case study research is considered specifically strong in getting in-depth understanding of non-linear processes that are shaped by a multiplicity of variables (Gerring 2004, Flyvbjerg 2006, Thomas 2011). Because sensemaking over complex ontology and distant epistemology is central in my research question, I adopted frame analysis of both written text and speech in each case study. Because I aim to relate sensemaking to institutional arrangements and state traditions, I added institutional analysis to my case study research.

#### *1.5.1.1 Selecting case studies: geographical considerations*

Because my research was embedded in the Dutch research programme *Knowledge for Climate, theme 7* which centred on climate adaptation governance challenges in the Dutch context, I took this Dutch context as my point of departure. Apart from organisational reasons, the Dutch context shows some specific characteristics which make it challenging in view of adaptation to climate change, and an

interesting case for academic inspiration and cross-national comparison. The lowland delta nature of most of the Dutch territory makes the country potentially vulnerable to climate-related issues like sea level rise, increasing river discharges, precipitation patterns, storm surges, and prolonged summer droughts causing saltwater intrusion. Because of this specific delta context, the issues affected by climate change are often water related and geographically intertwined on a relatively small piece of land. The Dutch context could be considered exemplary for delta areas around the world, which generally share climate adaptation challenges in densely populated lowlands with vibrant economies depending on complex infrastructures, water management systems, and related spatial planning. Climate change therefore poses new governance challenges to delta regions for which the Dutch delta might be an interesting illustration and departure point (cf. Lebel et al. 2005, Kallis et al. 2009, Norgaard et al. 2009, Adekola and Mitchell 2011).

#### *1.5.1.2 Selecting case studies: institutional considerations*

In terms of governance practices, Dutch adaptation to climate change empirically shows continuities as well as discontinuities with the Dutch tradition of dealing with collective action problems through *poldering*. In some cases, climate adaptation is mainstreamed in existing poldering approaches. In these cases, governance follows the Dutch neo-corporatist state tradition where limited organised interests negotiate with the state in an institutionalised fashion about which societal interests to serve (Schmitter 1974, Prak and Luiten van Zanden 2013, Boezeman et al. 2014, Vink et al. 2014). Other cases show signs of discontinuity with this traditional approach, allowing for more ad hoc deliberation with a much wider and less organised array of stakeholders and societal actors, known as deliberative governance (Dryzek 2010). These developments in institutional arrangements make in-depth investigation of the framing processes and their outcomes all the more interesting; and cross-national comparison of case studies is interesting to understand the implications of traditional state organisation for framing processes.

### *1.5.2 Frame analysis in context*

#### *1.5.2.1 Zooming in: from official policy proposals to actual frame interactions in governance*

To investigate and compare the frame interaction processes in different institutional arrangements and state traditions, I start with a distant view towards frame developments in official water policy proposals over time, which I discuss against the backdrop of a rise and fall in societal attention to climate change. Subsequently, I systematically assess the scholarly approaches to making sense of these frame developments in climate adaptation governance. Inspired by both the empirical developments in official policy framing over time and the different theoretical approaches to governance of adaptation to climate change, I open the black box of concrete governance practices. I mapped frame developments and frame interactions by in-depth case study research of multiple cases. To understand the variability in frames, frame interaction processes, and outcomes across

institutional context and state tradition, I further the exploratory character of in-depth single unity analysis by comparing the multiple governance units analysed (Carolan 2004, Gerring 2004, Thomas 2011, Biesbroek 2014).

#### *1.5.2.2 Opening the black box: frame interactions in institutionalised contexts*

I investigate and compare framing processes and institutional arrangements by starting my case study research of climate adaptation governance processes in traditional institutionalised arrangements mirroring the Dutch neo-corporatist state tradition. I study how scientific knowledge was employed in constructing societally legitimate framing in the traditional Dutch context of a political advisory committee. This second *Dutch Delta Committee* (Delta Commissie 2008) dealt with climate adaptation challenges in the field of national flood safety and freshwater supply, and represents a typical neo-corporatist approach to unifying a limited number of interests and policy fields in an institutionalised closed governance arrangement. The arrangement translated scientific knowledge into policy advice. Second, I study frame interactions in a regional multi-governmental water governance programme mainstreaming climate adaptation. This *Dry Feet 2050* governance programme mirrors the Dutch neo-corporatist governance approach in its strongly routinised governance process incorporating a limited number of preselected organised interest groups.

#### *1.5.2.3 Opening the black box: frame interactions in deliberative governance contexts*

To understand the role of institutions in framing processes, I study modern ad hoc deliberative governance arrangements as well. These arrangements mirror the scholarly pleas for more effective and legitimate climate adaptation policies, but show discontinuity with the Dutch neo-corporatist state tradition. For the third case study, I select the regional ad hoc organised *Dutch Delta Programme for the Ijsselmeer region* (DPIJ). This programme represents a deliberative governance initiative, focusing on adaptation measures for flood safety and freshwater availability. The programme involved a vast number of public and private actors but displayed limited institutionalisation. For cross-national comparison, I conduct a fourth case study of a similar deliberative governance initiative, however in a different state tradition. In this case, I select similar regionally organised deliberative governance initiatives of the *Anglian Regional Flood and Coastal Committees* in the UK. These deliberative governance initiatives involve public and private actors and a more modest role for the state, mirroring the *pluralist* state tradition of the UK.

#### *1.5.2.4 Comparing framing processes: cross-unit comparison and cross-national comparison*

A cross-unit and cross-national case study comparison of the four cases enables me to conduct: 1) in-depth learning of climate adaptation governance as processes of puzzling and powering through frame interactions, 2) cross-unit comparison between framing processes in different institutional

contexts in the same state tradition, and 3) cross-national comparison of framing processes in similar institutional contexts in different state traditions. In terms of state tradition, my Dutch point of departure illustrates a continental European, neo-corporatist tradition of state organisation. For reasons of comparability, I conduct the fourth case study in the context of lowland coastal Britain, which is geographically similar to the Dutch delta but exemplifies a different state tradition. This pluralist British state tradition is most akin to state organisation in many Anglo-Saxon countries.

### *1.5.3 Research of governance and research for governance*

In the cases of the DPIJ and the Dry Feet 2050, the in-depth research of concrete governance practices sparked questions from the research subjects to me as researcher on the characterisation of their governance approach and the implications of the approach in terms of effectiveness and legitimacy. This yielded two additional advisory trajectories informed by the original research. Apart from my original focus on research *of* governance arrangements, this allowed for a new, more evaluative focus on what role research might play *for* governance (Swart et al. 2014). Guided by the same theoretical framework as I employ in the rest of my research, I discuss the results of the evaluative questions for the DPIJ in detail in chapter 7, and for the Dry Feet 2050 case in Boezeman et al. (2014), which is not part of this thesis but to which I refer in my final conclusions.

## 1.6 Research methods

The research methods are presented in table 1.1.

### *1.5.1 Data collection, type of data, and data processing*

Data collection was based on available relevant textual and contextual data (Wood and Kroger 2000). To understand frame interactions, data were frames and frame interactions in the form of language in use and the textual language in (intermediary) policy documents that came out of the frame interactions. In addition, institutional analyses were done on the basis of institutional data, such as official documents, textual representations of law and regulation, and less formal behavioural and textual routines of policy actors. Data were mainly collected through participatory observation during stakeholder meetings, or closed committee meetings of civil servants. In addition, relevant intermediary policy documents, presentations, and working papers dating from before, during, and after the meetings were collected. Intermediary findings were used as input for frame reflections during interviews with stakeholders. Finally, interviews were conducted with key figures in the four case studies. If possible, all spoken interactions with stakeholders or stakeholder meetings were audio recorded and transcribed (Wood and Kroger 2000, Silverman 2001). To assess the dominant understandings in the scientific climate adaptation governance literature, I adopted a systematic method of data collection in the scientific database Scopus, which allowed for both a

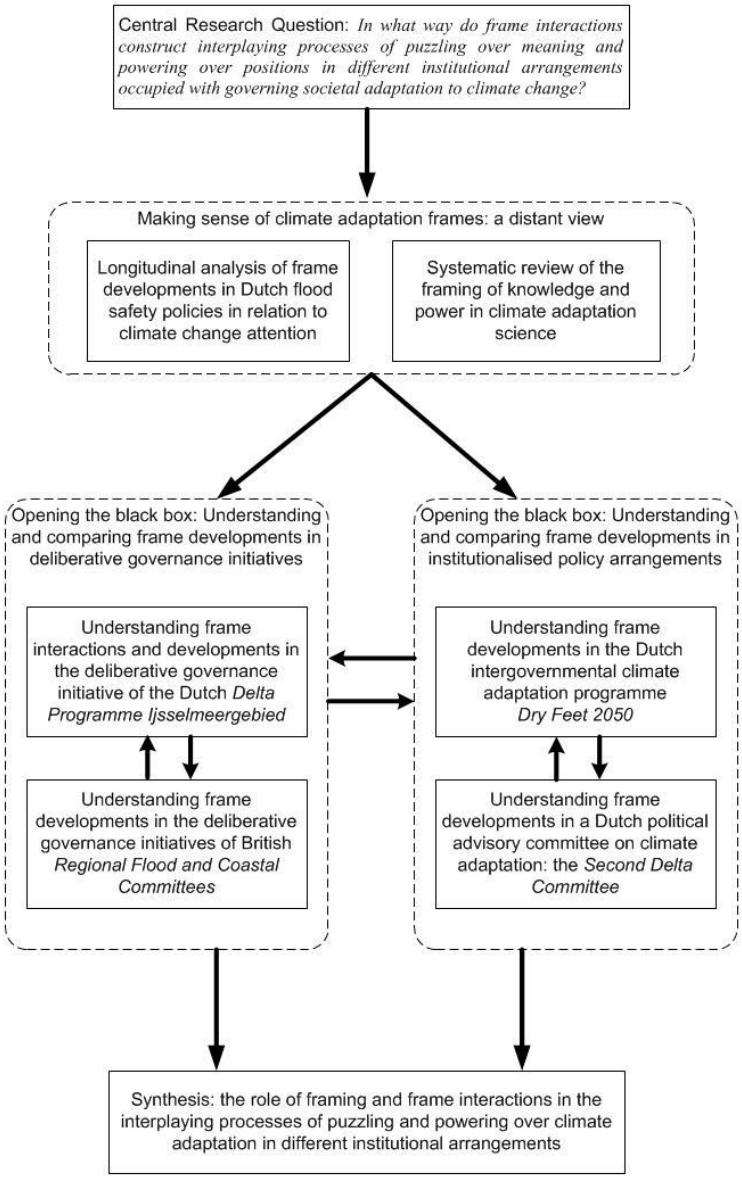



**Figure 1.2 Research design**

systemised qualitative analysis and a quantitative analysis of the dominant framings in the literature. As elaborated in chapter 3, I followed Berrang-Ford et al. (2011) and Biesbroek (2013) in their systematic collection of data by developing textual search queries and processed data by developing extraction tables.

**Table 1.1 Research methods**

| Research steps / Research method | Data collection | Type of data | Data processing | Data analyses |
|---|---|---|---|---|
| **Frame analyses of policy interactions** | Participatory observation of policy meetings and<br>stakeholder meetings in the governance process | Field notes and audio recording | Transcriptions of spoken interaction | Qualitative analyses of interactional framing |
| **Frame analyses of intermediary textual outcomes (formal and informal documents)** | Collecting intermediary and final documents in the governance process | Policy documents | | Qualitative frame analyses to be compared with frame interactions during stakeholder meetings |
| **Process reconstruction through interviews** | Interviews with key figures in the governance process | Notes and audio recording | Transcriptions of interviews | Mutually comparing argumentation with (interactive) frame analyses of policy process |
| **Institutional analysis** | Collecting official documents, and observing behavioural and textual routines | Policy documents Observations, notes and audio recordings | Transcriptions if required | Interpreting institutional rules, roles and regulation, and interpreting organisational goals and routines |
| **Analysis of scientific literature on the governance of adaptation to climate change** | By developing search queries in Scopus | Scientific peer-reviewed journals on the governance of adaptation to climate change | Development of extraction tables | 1) Quantitative analysis of number of journals addressing specific issues<br>2) Qualitative analysis of the framing |

### *1.5.2 Data analysis and contribution to research question*

In analysing frames and frame interactions as the puzzling and powering interplay in different governance settings, the emphasis was on an (interpretive) frame analysis of transcriptions of stakeholder meetings and (intermediary) textual policy outcomes and presentations. In my constructivist social linguistic approach, I focused on textual frames in the form of 1) language-in-interaction between actors and 2) the textual outcomes as laid down in policy documents or statements produced by these actors. In this approach, I analysed textual interactions as meaning-making devices consciously or unconsciously employed by the actors (Schön and Rein 1994, Dewulf et al. 2009, Weick et al. 2010) and their use as (strategic) tools for including, excluding,

emphasising, or downplaying issues, processes, relations, or identities in a process of negotiating shared meaning (Entman 1993, Benford and Snow 2000, van den Brink 2009).

Texts were studied as parts of the concrete interaction context where they occurred. Wood and Kroger (2000: 91–95) offer a series of general guidelines for doing textual analytic research: (1) try to identify the meaning to and for the participants, (2) do not ignore the obvious but try to explain it, (3) concentrate on what the speaker is doing through the talk, (4) explore the consequences of slightly different versions of the text through thought experiments, (5) look carefully at how the text is structured, (6) be alert to multiple functions of discourse, (6) adopt a comparative stance, (7) question the taken-for-granted, and (8) pay attention to grammar (e.g. passive versus active formulations). In addition, part of the analysis of the frames and frame interactions concerned interpreting the institutional arrangements that set the rules of the framing game.

I analysed institutional arrangements by interpreting the official rules, regulations, and especially the routinised behaviour and speech of the policy actors involved. To strengthen this understanding, I aligned the analyses with a policy process reconstruction through analysis of policy documents, institutional arrangements, and interview recordings with key figures. This yielded insight into intentions and routines behind the frame interaction processes, and whether and how the institutional arrangements set the rules and boundaries of frame interactions.

By both qualitatively and quantitatively assessing the scientific understandings -or framings- of the governance of adaptation to climate change in the selected scientific literature, I was able to 1) sharpen my findings and 2) scientifically position my findings. Qualitative analysis allowed me to sharpen and position my findings in relation to the discovered variety of clusters in scholarly understandings. The quantitative analysis enabled me to position my findings in relation to the relative dominance of these scholarly understandings.

## 1.7 Structure of the thesis

This thesis consists of six scientific papers, of which four have been published in scientific peer-reviewed journals. One paper is submitted to a scientific peer-reviewed journal and was still under review during the finalizing of this thesis. The 6$^{th}$ paper is published as a chapter of a scientific book. A shortened version of the concluding chapter of this thesis has been published as a working paper for the Dutch scientific council for government policy (WRR) (see table 1.2). Each chapter discusses the scientific theory through which it conceptualises empirical results and answers part of the central research question. In chapter 2, I analyse the changes in official Dutch water management framing of governmental communication to the general public in view of the emerging issue of climate change and the rise and fall of attention to it in media and politics. Triggered by these frame developments and the role that scientific knowledge and the organisation of power is suggested to play in these frame developments, I continue with a literature review in chapter 3 in which I analyse how peer-reviewed scientific literature addresses the role of knowledge and power in the governance of climate

adaptation. In response to the dominant focus on what I define as a *system assessment approach* to the governance of adaptation in the scientific literature, I propose a more dynamic understanding of policymaking. I do so by borrowing the conceptualisation of policymaking as interplaying processes of puzzling and powering from macro-economic literature on welfare state reform. In chapter 4, I follow my research design in opening up the black box of organising meaning and power in the context of the Dutch political advisory committee, the Second Delta Committee, which can be considered a typical boundary work organisation. Through the lens of boundary work theory, I describe how the scientifically constructed climate change problem can be framed into societally legitimate policy recommendations. By analysing the practices of meaning-making in this second Delta Committee, I show not only how internal practices determine how meaning gets constructed, but also how a strategic process of interacting with a broader societal context largely determines the legitimacy and effectiveness of framing the epistemologically distant knowledge for policy development. In chapter 5, I further this empirical approach by analysing how the sensemaking over concrete policy options takes place in the form of constant frame interactions between public and private actors shaping the processes of puzzling and powering. I show how frame interactions in a semi-open ad hoc deliberative governance initiative of the Delta Committee's successor, DPIJ, correspond with the dominant system assessment conceptualisation as derived from the scientific literature analysis in chapter 3. In addition, I show how this dominant technical framing leads to what I define as a *political bystander effect* among political decision makers. I discuss how this technical framing relates to the semi-open, little institutionalised ad hoc character of deliberative governance. Inspired by these findings, chapter 6 compares the deliberative governance process of DPIJ with an institution-centred policymaking arrangement adopted by the Dutch Dry Feet 2050 climate adaptation programme. This arrangement closely mirrors the Dutch neo-corporatist state tradition. By comparing both cases with a British deliberative governance initiative, I subsequently show how the differences in processes and outcomes relate with different institutional arrangements and traditions in state organisation. In chapter 7, I adopt a more reflective approach to the development and application of knowledge in governance. By referring to additional case study research commissioned by one of the governmental organisations under study in chapter 5, I reflect on doing research *for* governance in addition to research *of* governance. I reflect on this so-called *action research* as a method for policy investigation that not only yields better knowledge, but also leads to policy advices that fit the specific policy context. In chapter 8, I start by answering my central research question, after which I answer my three research sub-questions which underpin the central research question. Subsequently, I reflect on the strengths and methodological limitations of my research, make suggestions for further scientific investigation, and make recommendations for policymaking. Finally, I reflect on the implications of my research in the light of broader governance trends and theoretical concerns.

## Table 1.2. Structure of the thesis

| Chapter: | RQ: | Research subject: | Published as: |
|---|---|---|---|
| 1. Introduction | | Setting the scene: Conceptualising the societal challenge of a changing climate as a wicked problem. Building a theoretical framework which describes the conceptual relations that make up the governance of adaptation to a changing climate. Proposing frames and frame interactions as a conceptual interplay between processes of puzzling over meaning and powering over positions. Formulating research questions that address this theoretical claim. | |
| 2. Changing climate, changing frames: Dutch water policy frame developments in the context of a rise and fall in attention to climate change | 1, 2 | Frame developments at a glance: Comparing official frame developments in three Dutch flood safety policy programmes over time. Projecting these developments against the backdrop of a rise and fall in societal attention to climate change. Discussing how these official frame developments point towards backstage processes of puzzling and powering. | Vink, M. J., Boezeman, D., Dewulf, A., & Termeer, C. J. (2013). Changing climate, changing frames: Dutch water policy frame developments in the context of a rise and fall of attention to climate change. *Environmental Science & Policy*, *30*, 90–101. |
| 3. The role of knowledge and power in CCAG, a systematic literature review | 1, 2 | Systematically assessing how scientific literature on climate adaptation governance makes sense of the interplay between the organisation of knowledge and the organisation of power. Distilling four approaches to how the climate adaptation governance literature defines this interplay; these are contrasted with what political scientists traditionally defined as an interplay between processes of puzzling and powering. | Vink, M. J., Dewulf, A., & Termeer, C. (2013). The role of knowledge and power in climate change adaptation governance: a systematic literature review. *Ecology and Society*, *18*(4), 46. |
| 4. The Dutch Delta Committee as a boundary organisation | 1, 2, 3 | Opening the black box of political advisory committees: Describing how the Second Dutch Delta Committee worked, and how this committee can be understood as a special type of boundary work between different societal worlds. Explaining how the committee successfully employed scientific knowledge in constructing scientifically, politically, and societally legitimate problem frames. | Boezeman, D., Vink, M., & Leroy, P. (2013). The Dutch Delta Committee as a boundary organisation. *Environmental Science & Policy*, *27*, 162–171. |
| 5. Unravelling deliberative governance: Understanding the interplay between puzzling over meaning and powering over positions through frame interactions. | 1, 2 | Opening the black box of deliberative governance: Describing how frames and frame interactions in the deliberative governance initiative of the Delta Programme Lake Ijssel constructed an interplay between processes of puzzling and powering in a typical deliberative governance network setting. Discussing how these frame developments in combination with the ad hoc deliberative governance arrangement led to what socio-psychologists labelled a 'political bystander effect'. | Vink, M. J., Dewulf, A., & Termeer, C. (2014). Unravelling deliberative governance: understanding the interplay between puzzling and powering through frame interactions. Under review, *Administration and Society.* |
| 6. Do state traditions matter? Comparing deliberative governance initiatives for climate change adaptation in Dutch corporatism and British pluralism | 1, 2, 3 | Comparing framing processes and actor involvement in deliberative governance initiatives for climate adaptation: The comparison is two-fold. First deliberative governance initiatives are compared across state traditions of neo-corporatist Netherlands and pluralist UK. Second, framing processes and actor involvement are compared between a newly set up deliberative governance initiative and a traditional policy regime mainstreaming climate adaptation in a similar state tradition. | Vink, M. J., Benson, D., Boezeman, D., Cook, H., Dewulf, A., & Termeer, C. (2014). Do state traditions matter? Comparing deliberative governance initiatives for climate change adaptation in Dutch corporatism and British pluralism. *Journal of Water and Climate Change,* 6(1), 71–88. |
| 7. Action research in governance landscapes; Partnering with city guides and gatekeepers. | 1, 2, 3 | Opening the black box of developing and applying knowledge for governance: Reflecting on action research as a method for: 1) developing more in-depth knowledge about deliberative governance process and its actors, 2) effectively applying new knowledge in decentred governance processes. | Vink, M.J. Boezeman, D., Dewulf, A., & Termeer, C. (2014). Action research in governance landscapes: partnering with city guides and gatekeepers. In Buuren van, A., Eshuis, J., & Vliet, van, M. (2014). *Action research for climate change adaptation. Developing and applying knowledge for governance*. Routledge, New York. |
| 8. Conclusion and reflection | 1, 2, 3 | Synthesising the results of the research according to the research questions and answering my central research question, reflecting on the methodological limitations of my research, and discussing the implications of my research. | A summary has been published as: Vink, M.J, & Dewulf, A. (2015), *Zonder arena geen spel,* working paper for the Dutch Scientific Council for Government Policy (WRR), The Hague. |

# Chapter 2

## Changing climate, changing frames: Dutch water policy frame developments in the context of a rise and fall of attention on climate change[1]


### Abstract

Water management and particularly flood defence have a long history of collective action in low-lying countries like the Netherlands. The uncertain but potentially severe impacts of the recent climate change issue (e.g. sea level rise, extreme river discharges, salinisation) amplify the wicked and controversial character of flood safety policy issues. Policy proposals in this area generally involve drastic infrastructural works and long-term investments. They face the difficult challenge of framing problems and solutions in a publicly acceptable manner in ever changing circumstances. In this paper, we analyse and compare (1) how three key policy proposals publicly frame the flood safety issue, (2) the knowledge referred to in the framing and (3) how these frames are rhetorically connected or disconnected as statements in a long-term conversation. We find that (1) framings of policy proposals differ in the way they depict the importance of climate change, the relevant timeframe and the appropriate governance mode; (2) knowledge is selectively mobilised to underpin the different frames and (3) the frames about these proposals position themselves against the background of the previous proposals through rhetorical connections and disconnections. Finally, we discuss how this analysis hints at the importance of processes of powering and puzzling that lead to particular framings towards the public at different historical junctures.



1 Published as: Vink, M. J., Boezeman, D., Dewulf, A., & Termeer, C. J. (2013). Changing climate, changing frames: Dutch water policy frame developments in the context of a rise and fall of attention to climate change. *Environmental Science & Policy*, 30, 90-101.

## 2.1 Introduction

In September 2008, a major Dutch political advisory committee – *the Delta Committee* – presented its advice to the government concerning the state's flood safety in light of climate change (Delta Committee, 2008):

> *"The main conclusions from the advice are:*
>
> *...Climate change and sea level rise are facts;*
>
> *From now on the Netherlands should work on the improvement of its flood safety;*
>
> *Water safety means: flood protection, ensuring fresh water supply and the conservation of estuaries;*
>
> *The safety behind the dykes should be increased by a factor of at least 10;*
>
> *A ministerial steering committee headed by the Prime Minister should monitor the implementation of the twelve recommendations made by this Delta Commission.*
>
> *...According to the Delta Committee, a sea level rise of 0.65 to 1.3 metres in the year 2100 and 2 to 4 metres in 2200 should be taken into account; more than has been assumed to date. The committee believes that it is wise to reckon with possible upper limits, so that decisions and measures will hold for a long time span."*

This is a remarkably outspoken statement given the complex issue of climate change. It also includes top-down governance prescriptions which seem at odds with the traditional Dutch consensual decision-making approach known as "poldering." For centuries, consensus through negotiation has been the cornerstone of legitimate collective action in heterogenic polder communities fighting unpredictable storm surges and a rising sea level (Dolfing and Snellen, 1999; De Vries and Wolsink, 2009; Koningsveld et al., 2008). Local water management institutions called water boards have had to deal with planning dilemmas which many scholars describe as ill-defined, ill-structured or wicked, demanding complex negotiations over diverging problem definitions or *frames* (Rittel and Webber, 1973; Hisschemöller and Hoppe, 1995; Schön and Rein, 1994; Lach et al., 2005; Warner, 2008).

These planning dilemmas are not specific to the Dutch context; rather, they are encountered in densely populated deltas all over the world. Although dealt with in context-specific ways, the general heterogeneous character of delta societies with their wide variety of publics, interests and problem definitions or *frames* (Schön and Rein, 1994) often make water management dilemmas

subject to debate and prone to controversy (Norgaard et al., 2009; Kallis et al., 2009; Lebel et al., 2005; Kirby et al., 2010; Adekola and Mitchell, 2011). Correspondingly, one would expect that the complexities of the climate change issue would only amplify the rhetorically challenging task of public policymaking about flood safety in these plural societies (Hulme, 2009; Giddens, 2009; Adger et al., 2009).

However, the public announcement of the Delta Committee's findings seems surprisingly bold about the meaning of the climate issue for the Dutch delta area. Its deviant problem framing led the committee to recommend rather drastic top-down interventions in both the country's physical water management system and its institutional water governance arrangements. Perhaps even more surprising is the ease with which the committee succeeded in getting the new water management frame and related governance approach accepted by government (Ministerie van Verkeer en Waterstaat, 2008) and the moderate debate this produced in parliament (De Vaste Commissie voor V&W, Vrom & LNV, 2009) and society (Verduijn et al., 2012). This is especially surprising given the high costs, the rising controversy on climate change in science and society, the far-reaching consequences for several waterfront towns, and the friction between the top-down prescriptions and the predominantly consensual governance approach at the time (De Vries and Wolsink, 2009; Disco, 2002). Apparently, the committee's public announcements about a potentially controversial policy proposal struck a chord and were hard to disagree with.

### *2.1.1 Aim and structure of the paper*

Triggered by the example of the Delta Committee's remarkable and apparently successful public framing of flood safety policy, this paper examines how flood safety policy is framed in public announcements at different points in time, in the context of the emerging issue of climate change. Given the knowledge-intensive nature of the water and climate policy domains (Termeer et al., 2012), we also focus on how knowledge is mobilised in these publicly framed policies. Because every policy proposal is understood against the backdrop of earlier policies and proposals, we also look at how the different points in time relate to each other by analysing the rhetorical connections and disconnections between different frames employed over time.

Accordingly, this paper compares three public announcements of major policy proposals in Dutch flood safety policy. The first announcement, in 1996, presents the policy proposal called Room for the River, before climate change emerged on media and policy agendas. The second announcement, in 2008, presents the Delta Committee's recommendations discussed above, a proposal with a comparable aim but more than a decade later and with climate change high on media and policy agendas. The third announcement, in 2011, presents a follow-up policy proposal to the Delta Committee's recommendations, called the Delta Programme, in a context where the issue of climate change had become controversial in the media and had disappeared from the Dutch policy agenda.

Through these analyses, the paper aims to addresses three research questions. First, how do the announcements of three key policy proposals publicly frame the flood safety issue? Second,

what knowledge is mobilised to construct these frames? Third, how are these frames rhetorically connected or disconnected as statements in a long-term conversation? We address these questions taking into account a societal context where the issue of climate change over time emerges, gains currency and becomes controversial.

To answer these questions, this paper builds a theoretical framework starting from the characteristics of wicked problems, focusing on the role of framing and knowledge. We use Schön and Rein's (1994) ideas on how metaphors and storylines can be used as structuring elements for framing policy, and then turn to Jasanoff (2003), Turnhout et al. (2008) and Turnpenny et al. (2009), who indicate an entanglement of scientific knowledge and policy framing. We take the frame analysis a step further by using theory on textual conversations (Edwards, 1997; Hardy et al., 2005) to analyse how the announcements implicitly refer back to and position themselves towards earlier policy proposals. In the methods section, we explain our frame analysis and justify the selection of the analysed policy texts. The resulting frame analysis leads us to a discussion focusing on a comparison of the frames and knowledge mobilised over time. Linking back to our theoretical framework, we discuss how these frames are rhetorically connected or disconnected as statements in a long-term policy conversation. Finally, we discuss how our results hint at an interplay of powering and puzzling processes (Heclo, 1974; Turnpenny et al., 2009) that might have led to these frame developments.

## 2.2 Theoretical framework

### *2.2.1 Framing wicked problems*

In planning studies and political science, scholars refer to both water and climate issues as classical wicked problems (Rittel and Webber, 1972; Lach et al., 2005; Lazarus, 2008; Termeer et al., 2011). Wickedness here does not refer to witchcraft or evilness but rather is used by Rittel and Webber to characterise a policy problem in a meaning akin to malignant, vicious, tricky or aggressive (Rittel and Webber, 1972, p. 160). In contrast to the logic of rational problem solving, where problems are definable, understandable and therefore solvable, Rittel and Webber sketch a history of planning professionals unsuccessful in solving planning problems, resulting in restive clients or publics. Different publics assign different meanings to the problem, and this plurality of publics and associated problem definitions make it difficult to define what is at stake and what should be done.

Plurality is often referred to as a common characteristic of traditional Dutch water management. Earlier water boards continuously organised consensus on water management issues through negotiation over problem definitions and values with the various lowland stakeholders involved. Plurality concerned the meaning of costs and benefits for these stakeholders in terms of cooperation in the construction and maintenance of flood protection infrastructure such as dykes, but also in terms of the purpose of these artificial pieces of land for cattle grazing, building or flood protection (Dolfing and Snellen, 1999). In more recent water management history, this wicked character of flood safety was often evident in how the Dutch state had to cope with persistent opposition towards

major flood safety policies[2] (Huitema and Meijerink, 2010; Wesselink, 2007). Correspondingly, Rittel and Webber consider wicked problems as social problems that cannot be solved – they can only be re-solved over and over again (Rittel and Webber, 1972, p. 160).

Together with the ambiguity about what the problem means to different publics, the understanding of the causal relations behind the problem may also be uncertain. A decrease in floods might be viewed as a result of policy interventions, but also as an indication of the uselessness of the policy interventions since the problem might seem to be disappearing. Intrinsic uncertainty about the problem means that for some complex issues we simply do not know the precise causal relations, or which policies will cause what impacts (Hisschemöller and Hoppe, 1995). Accordingly, the uncertainty in climate change knowledge, impacts and the ambiguity inherent in the wide variety of problem definitions, values and interests associated with the issue, make flood safety policy in the context of climate change a "wicked problem par excellence" (Turnpenny, 2009; Termeer et al., 2012).

Therefore policymaking about wicked problems fits neither a rational planning approach where the "best" policy option can be derived from proper calculation and investigation, nor a pure political practice where stakeholders negotiate about their interests on the basis of rational micro-economic thinking (Schön and Rein, 1994). Scholars like Stone (1989) and Schön and Rein (1994) have introduced the concept of framing in relation to these policymaking processes. They understand the process of policymaking about wicked problems as a contest over the framing of ideas in which they define framing as "…a way of selecting, organising, interpreting and making sense of a complex reality to provide guideposts for knowing, analysing, persuading and acting" (Rein and Schön, 1994, p. 146). What is discussed by Rittel and Webber (1972) as problem definitions are understood by Rein and Schön (1991) as problem frames that rely on storylines or metaphors. Explicitly or implicitly, these storylines link accounts of the problematic policy reality to particular proposals for action, implying a normative leap from what "is" to what "ought to be" (Rein and Schön, 1991). By employing framing theory as a resource for making sense of reality and legitimising policies dealing with this reality, we shall work towards answering our first research question.

### *2.2.2 The use of knowledge in framing wicked problems*

Environmental issues are often argued to differ from other wicked policy issues because their understanding is tied more closely to scientific knowledge (Hannigan, 2006), making them more "epistemologically distant" from day-to-day experiences (Carolan, 2004). Reliance on scientific arguments or authority can therefore be expected in the way environmental issues are framed. In the discussions that take place in various science–policy interfaces, experts and policymakers engage in prolonged debates about how to interpret particular research results and how to account for particular policies (cf. McNie, 2007; Turnhout et al., 2008). In the case of the policy-oriented

2 In 1976, the planning of a major flood safety intervention, the Eastern Scheldt barrier, had to be redesigned because of severe opposition emerging from both the fishery sector and nature conservation groups up to parliamentary level.

summary documents of the International Panel on Climate Change (IPCC) assessment reports, experts and policymakers spend ample time in reviewing, revising and interactively framing the results, implications and conclusions in light of the latest scientific discoveries and in light of ongoing policy processes in the climate change domain.

However, in the scholarly understanding of how scientific knowledge gets used in these policy processes, the role of frame interactions and strategic use of knowledge in policy framing is somewhat underdeveloped. A notable exception is Jasanoff (2003), who points at the importance of framing in reconfiguring institutions for merging science and policy. In different terms, Hannigan (2006) turns to the importance of frame alignment in the legitimate construction of environmental claims. Besides recruiting institutional sponsors and scientific authority, he stresses the need to connect to popular issues, to dramatise and to frame the solutions in a rhetoric of economic rationality. Different from strategically framing science towards attractive policy solutions, Turnhout et al. (2008) show how knowledge may be selectively claimed or demarcated in political debate and accordingly become politicised. Hence, this entanglement of knowledge in a framing contest over wicked problems is both the strength and the weakness of the process. It allows for policy-relevant science and scientifically informed policy, but faces at the same time the double risk of policymaking being too strongly driven by what happens to be known and researched in the scientific realm, or of scientific inquiry being too strongly driven by particular policy processes. To answer our second question, we build on these ideas of knowledge playing an important and possibly strategic role in policy framing.

### *2.2.3 Sequences of policy announcements as long-term conversations*

The way policy proposals are publicly framed is to be situated not only in the contemporary societal and political context, but also in the sequence of policies and policy proposals that form the history of a particular policy domain. Approaches like discursive psychology (Edwards, 1997), sensemaking (Weick, 1995; Termeer, 2009) and interactional framing (Dewulf et al., 2009) have shown how people make sense of issues by continuously negotiating about meaning through language-in-interaction. The meaning of a particular statement has to be understood in light of the preceding statements by others, and can also be reworked by subsequent statements. Although these theories and methods have been developed primarily on the basis of face-to-face conversations, they can also be applied to written conversations that take place over longer timescales. In line with Hardy et al. (2005), conversations can be understood as sets of texts rhetorically and sequentially linked in a particular context. This allows us to apply interactional framing analysis to texts such as official policy announcements. We consider these texts as discursive acts in larger conversations of governmental organisations communicating to the public over time. Implicitly or explicitly, these governmental organisations may react to politically or societally articulated frames, or earlier governmental statements and policy presentations. In that sense, official policy announcements represent a balancing act, not only by making sense of the present, but also by positioning themselves towards earlier policies in that domain through rhetorical connections or disconnections. In answering our

third question, we employ interactive framing theory and focus on recurring textual elements or explicit connections/disconnections in the framing.



## 2.3 Methodology

Following our research questions, we emphasise the developments in publicly framed flood policies over time in the context of the emerging issue of climate change. We analyse textual frames, using the constructivist socio-linguistic approach (Phillips and Hardy, 2002; Wood and Kroger, 2000). In line with Miller (2000) and Boezeman et al. (2010), the analysis has a longitudinal character in which the development and interactions of policy frames in policy presentations to a general public are analysed over time. To understand how frame developments occur in relation to emerging issues or previous frames, we follow Hardy et al. (2005) as discussed in the previous section.

### *2.3.1 Data collection*

#### *2.3.1.1 Public announcements of policy proposals as our unit of analysis*

To study frame developments, we selected three official announcements of policy interventions in the national flood safety domain. The announcements were published by either a ministry taking responsibility for flood safety, or another governmental organisation at the national level claiming responsibility. We chose policy announcements as our unit of analysis for reasons of access and comparability in their aim and structure. All three initiatives focus on an overall national strategy to combat flooding, either along the big rivers or along both rivers and coastline. All three propose new infrastructural interventions and new governance arrangements. Official policy announcements represent a condensed version of the outcome of a complex policy development process, including general statements of how to understand reality and a normative leap from what "is" to what "ought to be" (Rein and Schön, 1991, see Section 2.2.1). Hence, the outcome is presented in such a way as to convince the general public and may react to earlier policies, policy interventions or changes on the ground.

#### *2.3.1.2 Selecting policy announcements*

Because we were particularly interested in the role of the climate change issue in the framing of flood safety policies, we chose three key policy initiatives before, during and after the rise in attention on the climate change issue. Therefore, like Boykoff (2011) on the basis of English language newspapers at a European level, we reconstructed the media attention on climate change in the Netherlands on the basis of the Dutch newspaper, *NRC Handelsblad*. This newspaper has the oldest issues available online, has a relatively constant number of total articles per issue and is considered a leading newspaper. In the LexisNexis database, we selected articles with the keywords: climate

change (*klimaatverandering* or *klimaatsverandering*), or greenhouse effect (*broeikaseffect*) or global warming (*opwarming van de aarde*). As presented in Figure 2.1 the steep rise in attention after 2004 corresponds with the media attention shown by Boykoff (2011) for climate change in the English speaking part of Europe, followed by the fall in attention after the issue became controversial as a result of errors discovered in the 2007 IPCC report and released emails of climate scientists in a situation known as "climategate."

Apart from media attention, we also looked into the political attention on climate change by checking the governmental agreements of each cabinet from 1994 to 2011, using the same keywords as for our newspaper analysis. The issue appears in 1998, but disappears again in 2002. After 2002, it is exclusively mentioned as an issue of European $CO_2$ regulation. However, in the *Balkenende IV* coalition government programme of 2007, climate change becomes a prominent issue mentioned under its own heading, aimed at adaptation policies and sustainable development. With the fall in media attention after 2009 as presented by Boykoff (2011) and Figure 2.1 the issue remains unmentioned in the *Rutte 1* agreement in 2011 (Archief Rijksbegroting, 2011). Hence, in line with Jones and Baumgartner's (2004) ideas on societal attention being reflected in policy, media attention correlates with climate change attention on the Dutch policy agenda.

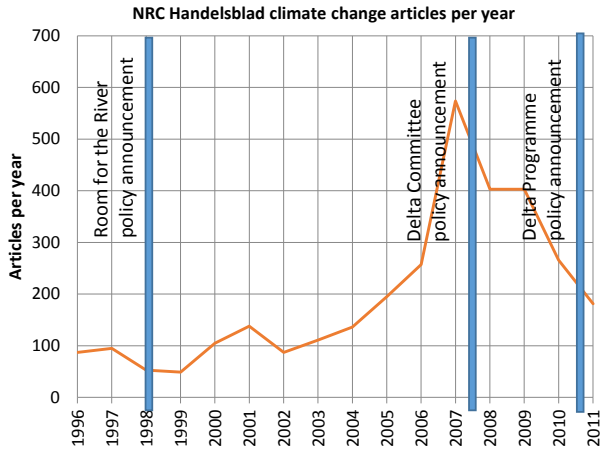



**Figure. 2.1. Newspaper articles on climate change (NRC Handelsblad) and timing of the policy announcements.**

### *2.3.1.3 The three selected policy announcements*

The first policy announcement is a co-production of both the ministry of public works and the ministry of spatial planning for a substantial new policy line in flood safety, Room for the River (RvR), in 1996 (Ministerie Verkeer en Waterstaat, Ministerie VROM, 1996, translated from Dutch by the authors). The policy line proposes a new strategy to protect vulnerable hinterland against peek flows and can be considered one of the largest water management projects ever envisaged in

the Netherlands (Brink, 2009). As can be derived from Boykoff's (2011) figures and Figure 2.1, there was no substantial attention on climate change at that time in media or politics. For the RvR policy line, there was no press release available and therefore the official announcement in the Government Gazette (*Staatscourant*) was used. Although slightly longer and more detailed, we considered the official announcement comparable to a press release, because its language, rhetoric and argumentation is also aimed at persuading the public.

Our second chosen policy announcement is the official press release for the presentation of the National State Committee for the Delta, the Delta Committee's (DC) recommendations on flood safety in the Netherlands in 2008 (Delta Committee, 2008, translated from Dutch by the authors). This presentation coincides with the episode of high media attention on climate change between 2007 and 2009 (see figure 2.1). The presentation of these DC recommendations again considers a new approach to flood safety, partly based on what the committee claimed as a new reality compared to former policy lines. Therefore this announcement may be seen as a reaction to earlier policy announcements such as the RvR policy line.

The third policy announcement is the official press release for the presentation of the National Delta Programme (DP) in late 2010 (Delta Programme, 2010, translated from Dutch by the authors); a policy programme under the responsibility of the Ministry of Transport, Public Works and Water Management that evolved out of the Delta Committee's recommendations two years earlier. Attention on climate change has waned; accordingly, the cornerstone of the policy proposals mentioned in DC's announcement has partly lost its momentum, and therefore the DP's announcement might be seen as a reaction to the former policy announcement. Moreover, this policy programme is the official governmental policy reaction to the Delta Committee's recommendations.

### *2.3.2 Data analysis*

In line with our interactional approach to framing, we relied on frame analysis that pays close attention to how language is used to construct the meaning of flood safety policies, thereby relying on the constructivist socio-linguistic approach to text analysis (Wood and Kroger, 2000), as indicated in Section 3. Part of this approach is the assumption that "if we wish to understand social events, we need to look directly at those events as these unfold, not at retrospective reports or second-hand data or other forms of 'self-report'" (Wood and Kroger, 2000, p. 26). Texts are thus studied as part of the concrete interaction context where they occur. Furthermore, this kind of frame analysis pays more attention to detail than do other qualitative methods, through the use of detailed textual analysis.

Wood and Kroger (2000, pp. 91–95) offer a series of general guidelines for doing textual analysis, a number of which are worth mentioning here: (1) try to identify the meaning to and for the participants, (2) do not ignore the obvious but try to explain it, (3) concentrate on what the speaker is doing through the text, (4) explore the consequences of slightly different versions of the text

through thought experiments, (5) look carefully at how the text is structured, (6) be alert for multiple functions of discourse, (6) adopt a comparative stance, (7) question the taken-for-granted and (8) pay attention to grammar (e.g. passive versus active formulations).

#### *2.3.2.1 Frame analysis*

To further structure of our frame analysis, we focused on six points of comparison leading to a comprehensive understanding of the frames employed. We started by analysing who was doing the framing by looking for explicit signs of the responsible agency. Second, we analysed the framing of the problem at stake by employing text analysis as mentioned in Section 3.2. Third, we analysed whether and how the emerging issue of climate change played a role in framing flood safety. Fourth, by focusing on explicit or implicit associations with time, we analysed the timeframe being employed. Fifth, we analysed the kind of governance arrangements proposed by the policy frames. Sixth, we concluded our analysis by focusing on the concrete policy measures proposed.

#### *2.3.2.2 Analysis of the mobilised knowledge*

The frame analyses successively led us to analyse what knowledge was referred to in the different frames employed. We searched for references to scientific disciplines, knowledge institutes, or specific bodies or types of knowledge. Furthermore, we analysed how the knowledge referred to was rhetorically used in the problem framing.

#### *2.3.2.3 Analysis of the rhetorical connectedness/disconnectedness of the public announcements about the policy proposals*

Following Hardy et al. (2005), we analysed how the framings of the different public announcements over time were rhetorically connected or disconnected. First, we looked at explicit references made to earlier policy announcements; second, we looked for implicit references made; and third we looked for references made to concepts, ideas or knowledge presented in earlier proposals. Then we assessed how these references represented connections with, or disconnections from, aspects of earlier policy proposals.

## 2.4 Results

### *2.4.1 Public announcement of the Room for the River policy line*

The title of the announcement is: *"Room for the River policy line."* Decreasing room for the river as a result of human intervention figures as the key problem in the announcement, and creating room

for the river figures as the most important solution. The announcement starts: *"Over time, room for the river has decreased. The recent high waters of the river Rhine and Meuse, the vulnerability of our land, the unfavourable expectations about climate change and sea level rise make clear that sustainable protection against high water has a high priority."* Hence, a decrease in room for the river in the natural riverbed is claimed to be the cause of the flood safety problem, a risk which may increase consequent to possible future changes in climate and sea level rise.

This claim is enforced by mentioning the cause: *"Embankments are the first cause of the restrictions to the river. The natural sedimentation of sand, stones and mud are other causes. But also (other) human activities such as the construction of buildings on the floodplains decrease the room for the river and thus increase the height of extreme high waters."* Clearly the problem is (partly) presented as manmade. In the context of the large infrastructural works for coastal and River Rhine protection undertaken in the preceding decades, the framing of embankments or dykes as causes of flood safety problems is remarkable.

Turning to the proposed governance arrangement, the announcement continues: *"Because the room for the river policy line took shape after discussions with stakeholder organisations such as the Union of Dutch Municipalities and the Union of Water Boards, the policy line does not need a legal status. This informal status will also enhance quick implementation."* The effectiveness and legitimacy of the policy line is here argued on the basis of past and future informal discussions between stakeholders, suggesting an informal deliberative governance arrangement.

The informal nature of the policy line aiming for reconciliation of interests, governmental layers and sectors is also evident from the absence of a prioritisation in the text: *"Sustainable protection against high water, now and in the future, has a high priority.... Every plan will be judged by a critical reflection including societal consequences and costs through mutual consultation of relevant governmental layers .... In line with spatial planning (spatial planning act) and in line with river management (River act), each act will be dealt with through coordination."* How high a high priority is remains unspecified. Quick and effective implementation is claimed to be possible through mutual harmonisation of different interests, governmental layers and policy fields.

Finally, preventative infrastructural measures are mentioned as less desirable than the creation of room for the river. *"Dyke enforcement and embankment strengthening will have the least priority and will only be done if no other measures are possible or if their effect is insufficient."*

### *2.4.2 Public announcement of the Delta Committee's recommendations*

The title of the press release *"Working together with water"* suggests an active cooperation between *"us"* (the people of the Netherlands) and *"water"* (the rivers and coastal waters that permeate and surround the country). The concept of *"working together"* also suggests a collective activity and seems to refer to the hard work lying ahead.

After summing up the most important conclusions, and stating that climate change and sea level

rise are *"facts"* as presented in Section 1, the narrative starts: *"According to the Delta Committee a sea level rise of 0.65 to 1.3 metres in the year 2100 and 2 to 4 metres in 2200 should be taken in to account; more than has been assumed to date."* Climate change is not presented as a matter of discussion, but simply as a fact, and one that relates directly to flood safety. The focus on sea level rise in relation to (expected) climate change introduces a very long timescale, enabling a presentation of dramatic figures like 2–4 metres – figures comparable to the most dramatic floods the Dutch can think of. In addition, the text suggests that these figures are new and reason for rethinking our flood safety policies.

This rethinking is stressed by the word *"urgent"* and by focusing on casualties and material damage: *"Hence the task of improving safety is urgent .... According to the Committee, much more attention should go to preventing casualties, and in addition 65 per cent of our national capital is in a floodable area."* The state of the current flood safety structures is called insufficient. There is a claimed risk of casualties and economic loss of 65 per cent of our national capital and this is stated as urgent. It relates this urgency to the previously stated figures of possible future sea level rise.

These issues are claimed to be too big and too urgent to be left to the regular political process or to private initiative: *"Financing of the safety measures should be independent of short-term political priorities or market trends, and responsibility should be allocated to the prime minister. A 'Delta Director' will ensure coherence and progress, and regional directors will coordinate the implementation .... A Delta Act will ensure a strong political administrative organisation."* Implicitly, this means that the issue should be depoliticised and that responsibility should lie with a central governmental agency situated above the usual departmental policy cycle and political decision making.

The national focus is stressed by framing flood safety as a public interest: *"Flood safety is important for the Netherlands as a whole. Hence the solidarity principle counts. And everybody will have to support financially the country's safety now and in the future. The committee stresses the responsibility of central government for a climate-proof and flood-proof Netherlands."* The national problem framing makes it a centralised responsibility.

### *2.4.3 Public announcement of the start of the Delta Programme*

The title of the press release is: *"Dutch level-headedness characterises the first Delta Programme." "Level-headedness,"* presented as a Dutch cultural feature, frames the press release as a national issue in line with a national identity.

The text starts by stating the main problem: *"To protect our country now, and in the future against high water and drought, that is the main goal of the first Delta Programme ... established out of Dutch 'Level-headedness,' it is based on the 2006 measurements and scenarios of the Royal Dutch Meteorological Institute .... The Delta programme consists of measures to ensure short-term safety and to provide a solid basis for the preparation of our future."* Taking the Royal Dutch Meteorological Institute's (KNMI) measurements and scenarios (i.e. not the IPCC scenarios or the Delta Committee's calculations)

as a starting point is framed as a sign of level-headedness. The references to *"our future"* suggest continuity and pragmatism at the same time. The continuation of prosperity into the future is emphasised, but also the time left for a proper preparation and planning of measures: it is the *"solid basis"* for our future which is referred to, rather than the final solution.

Later on, the text refers back to the KNMI measurements: *"We measure and know that the temperature and sea level are rising, that the soil is subsiding and that extreme weather events are further increasing."* All issues are presented as independent unstoppable exogenous issues, that can be measured today. Climate change is not mentioned as a cause.

The text then turns to the solution: *"In part at the request of parliament, the cabinet appointed a Delta Commissioner to draw up the Delta Programme, to keep it up to date and to have it implemented for the cabinet ... the Delta Commissioner is appointed to connect the different ministries, governmental layers, entrepreneurs, civil society and citizens ... [he] is preparing five delta decisions that will be submitted to the cabinet by 2015. These decisions involve new safety norms for dykes, the way in which we are safeguarding our fresh water supply, the water level for the IJsselmeer, the protection of the Rhine Estuary area without losing economic value, and the way in which cities and villages can build safely and sustainably in the future."* The Delta Programme is being presented as a legitimate and effective solution thanks to its mandate from both the cabinet and parliament, and the Commissioner's position in between stakeholders. The Commissioner will present the new safety norm, but the values upon which this norm will be established remain undefined. However, safeguarding economic value is mentioned as a precondition.

In the second half of the text, the importance of economic value is elaborated and related to future flood safety: *"The prosperity of our country is partly due to water, but water can also be unpredictable and dangerous. The population has grown considerably in recent decades and the economic value of our country has increased with our prosperity. A flood would cause great human and economic damage .... Only through continued investment can we keep our country safe from flooding." "Continued investment"* refers to continuity from the past into the future, suggesting a great deal of *"business as usual"* to maintain prosperity.

At the end, the text distances itself from the extreme scenarios and urgency stressed by its predecessor: *"What is at stake is not to take too many measures, nor too few, and not to take these measures too early, nor too late .... The Delta Programme is the cabinet's response to the recommendations of the Veerman Committee (2008)."* The timing and adjustment of measures refers to the relevant (longer) time line in the DP, and the apparent possibility of delaying the measures. By using the word *"response,"* the text distances itself from, rather than aligns to, the earlier Veerman Committee – the Delta Committee referred to in the second announcement.

## 2.5 Analysis of frame differences

In this section, we analyse the different frames employed by looking at the six focus points mentioned

in our methodological section. We interpret these frames as public statements of governmental agencies within a changing context.

In the RvR announcement, the framing is done by both the Ministry of Transport, Public Works and Water Management and the Ministry of Public Housing, Spatial Planning and the Environment. Clearly both ministries' responsibilities are reflected in the reconciliation of interests framed as the solution. In the announcement of the DC's recommendations, the framing is done by the independent committee. This distances the framing from governmental responsibility and provides freedom from any official governmental stance. In the announcement of the DP, the DP is doing the framing. Since this is a governmental programme, the framing is under the responsibility of the public works ministry.

If we look at the problem framing, in the RvR announcement we distinguish a flood safety problem framed as a regional "here-and-now" problem, partly caused by human actions that diminish the room for the river. Implicitly, the past and the natural are idealised as pursuable states of the river, leading to a solution of giving more "room" to the river by better reconciling human interests with a more natural river bed. Furthermore, flood safety is framed as one interest among many others, not standing above the rest. In the announcement of the DC's recommendations, however, flood safety appears as a critical long-term future problem, requiring urgent action because of the new exogenous development of climate change. Despite the possible anthropogenic character of climate change, the human cause disappears from the problem frame. Explaining this exogenous character as a threat to everyone without blaming anyone or any sector results in a national-scaled problem frame in which the Dutch all need to be defended. Correspondingly, the announcement proposes centralised adaptation through national solidarity as the principal solution. After the fading of climate change in the media and its disappearance from the coalition's programme for government after the elections of June 2010, the DP clearly faced a different context when issuing their problem frame. A rise in sea level and increased droughts are still mentioned as the primary reasons for action; however, their cause is left unspecified – the term "climate" does not appear in the DP's press release.

These differences in problem framing and use of climate change correspond with the different timeframes employed. Whereas the RvR announcement uses a short-term timeframe for here-and-now action justified on the basis of an implicitly idealised past, the DC announcement uses the climate change issue to introduce a very long timeframe of 100 to 200 years ahead. This enables the use of worst-case scenarios with extreme figures and impacts (e.g. sea level rise of up to 4 metres in 2200). Although climate change disappears from the problem framing in the DP announcement, the problem frame maintains a long timeframe, but continuity with the present is emphasised.

The governance frame and proposed policies in the RvR announcement are in line with the traditional poldering approach (Dolfing and Snellen, 1999), where consensus is reached through informal bottom-up negotiation between regional stakeholders for the reconciliation of interests. Infrastructural works are to be avoided. Here, flood safety is framed as a safety issue with an important human component, to be resolved through better spatial planning. This reflects a spatial or ecological turn as described by De Vries and Wolsink (2009), Brink (2009) and Disco (2002), and

**Table 2.1 The Three Policy Announcements Compared.**

| | | Announcement of Room for the River (RvR) policy line<br><br>14/4/1996 | Announcement of the Delta Committee's (DC) recommendations<br><br>1/9/2008 | Announcement of the Delta Programme (DP)<br><br>15/9/2010 |
|---|---|---|---|---|
| **1.** | **Who is doing the framing?** | Both the Ministry of Transport, Public Works and Water Management, and the Ministry of Public Housing, Spatial Planning and the Environment. | The Delta Committee, which is a state committee, but officially independent from the government | The Delta Programme under the ministerial responsibility of Ministry of Transport, Public Works and Water Management. |
| **2.** | **How is the problem of flood safety framed?** | A regional and here-and-now framing of flood safety, related to diminishing room for the river. The past is idealized as a pursuable 'natural' state of the river. | Problem framing is future oriented, national, and based on solidarity: climate change endangers flood protection and threatens the future and well-being of the country | Continuing to protect the country against floods to keep it attractive for living and working is the dominant framing. Draws on economic prosperity as main argument for action. |
| **3.** | **How is climate change used?** | Climate change will intensify existing problems, but is a secondary issue. | The Netherlands is safe now, but future climate change justifies radical action now. The Dutch should be prepared for worst case scenarios. | The text doesn't mentions climate change but emphasises 'Dutch level-headedness' instead. Abandons extreme scenarios and emphasises current measurements and moderate scenarios. |
| **4.** | **What time frame is used?** | Focus on here-and-now, idealizing the past. | Concrete policies for 2050, a vision for 2100 and anticipation on 2200. | Important references to the future, but mainly as continuation of the present. Implicitly 2100 is used as a reference point through reliance on the KNMI scenarios. |
| **5.** | **What governance frame is used?** | Cooperation and consensus between government layers and societal stakeholders is central to the policy process. | Flood safety is too important to be subject to political bargaining and budgetary negotiations. A depoliticized, top-down mode of governance is needed. | Return to a cooperative mode of governance where the delta Commissioner stands between state, market and civil society actors rather than above them. |
| **6.** | **What are the proposed policies?** | Informally reconciling flood safety and floodplain restoration in regional spatial planning policies, backed by a national water impact | Institutional reorganisation and centralisation. "future proof" technical measures, like dike enforcement based on | Same as proposed by Delta Committee, tough in consultation with stakeholders and postponed over a longer timeline: "*not too many* |

a "logic of peace" (Warner, 2008), where there is time and political room to negotiate over flood safety as one among many interests.

This radically changes in the DC's announcement where the extreme figures derived from the long

timeframe and climate change issue are used to propose worst-case-proof infrastructural measures (e.g. dyke enforcement). Furthermore, a nationally focused centralised mode of governance is proposed, fitting the logic of a crisis situation (Warner, 2008). This pictures the central authority as taking care of flood safety in the national interest. This long-term problem with a strong national focus is depicted as superior to generally short-term political negotiations and regional interests.

In the DP's announcement, the future-proof infrastructural works remain, as well as a centralised authority (the Delta Commissioner), but the governance frame has changed in terms of its top-down character. A more cooperative governance frame is presented, where the Commissioner stands "in-between" the parties instead of above them. In addition, the longer timeframe remains. Different from the drama that the DC associated with the future, this time the longer timeframe is associated with incremental policies *"not to take too many ... nor too few, not ... too early, nor too late."*

### *2.5.1 Knowledge mobilised in the public announcements of flood safety policies*

In all three announcements, the mobilised knowledge strongly relates to the problem framing, the use of climate change and the timeframe.

In the RvR announcement, a regional here-and-now problem framing referring to human impact points to localised knowledge: *"Per plan, a critical assessment including social consequences and costs of alternatives will take place in consultation with separate governments. River-based knowledge is the basis for the review."* This knowledge refers to multiple scientific disciplines referred to in the problem frame, such as spatial planning, hydrology and ecology. Furthermore, experience-based knowledge is referred to, often framed as "*observations*": e.g. "*Although these activities were in principle only allowed if the effect on the discharge capacity was compensated, it has been observed that the capacity to accommodate future high water discharge in fact has been decreased.*"

With the problem frame of a future-oriented flood safety problem caused by exogenous climate change, the knowledge referred to in the DC announcement is a global kind of scientific knowledge (Hulme, 2010), which in the framing is used to legitimise the engineering type of knowledge mentioned as part of the solution. High-end global climate change scenarios are mobilised and translated into concrete but rather dramatic figures for local sea level rise: a degree of drama that implies large engineering solutions rather than reconciling interests by adaptive spatial planning.

Although the proposed policies remain similar, the disappearance of climate change from the problem frame in the DP announcement is accompanied by a shift towards nationally focused knowledge about demographics and economics, and towards moderate sea level rise scenarios instead of global climate scenarios. Hence, foresights remained but different disciplines and scale models were mobilised to build a different argument behind the same polices. This is striking, because not much has changed in climate science.

In sum, we can see how the public announcements of flood safety policies selectively refer to, and rely on, particular kinds of knowledge that fit within the overall problem frame. Selectivity is

even evident in the reliance on climate change knowledge, where the particular sets of scenarios referred to can be seen to match with the severity and urgency of the measures proposed in the announcements. Knowledge is thus mobilised as a discursive resource (Turnhout et al., 2008; Turnpenny et al., 2009).



### *2.5.2 Rhetorical connections/disconnections between public announcements of flood safety policies*

In line with the idea of interactive framing between texts through rhetorical connections (Hardy et al., 2005), we can distinguish 1) some explicit rhetorical connections between the publicly announced policy proposals, 2) some more implicit rhetorical connections and 3) a lot of concepts borrowed from earlier framings.

Observing rhetorical connections made in the RvR announcement requires focusing on earlier policy announcements, which are beyond our selected data. However, what we do observe is the explicit disconnect made in the RvR announcement from the construction of river embankments as was common practice in the past. In addition to this ecological turn (De Vries and Wolsink, 2009; Disco, 2002; Brink, 2009), an explicit connection is made with the bottom-up tradition of reconciling spatial interests, which is in line with the Dutch poldering approach.

The DC's framing implicitly distances itself from earlier framings, such as the RvR framing, by stating: "*According to the Delta Committee, we should reckon for a sea level rise of 0.65 to 1.3 metres in 2100 and 2 to 4 metres in 2200 .... Hence the flood safety task is urgent: the climate is changing, sea level is rising and river discharges are increasing while 25 per cent of the flood safety structures do not meet the legal standards. These standards should be increased because the committee is of the opinion that more attention should be given to preventing casualties."* The new context of emerging climate change is clearly used to disconnect the committee's framing from earlier water policy frames. Rhetorically, this is underpinned by referring to different knowledge, and the use of a different time line. However, later on, an explicit reconnection is made to the earlier RvR programme: *"For the river areas, the programmes Room for the River and Meuse-Works should soon be implemented"*; apparently the committee is accepting the RvR programme as still legitimate. This shows nicely the balancing act that the publicly framed policy proposals represent: what we have said or done before still holds, but the new situation that we face makes us propose different things.

The DP's framing also draws partly upon the problem frame of its predecessors, and partly reworks or opposes this frame by referring to different knowledge, issues and values. The DP announcement distances itself from the DC by omitting the cornerstone of the DC's framing: climate change. This implicit divide is in line with the different knowledge referred to and a different problem framing. In addition, this divide is made more explicit by the statement: *"The Delta Programme is the cabinet's response to the recommendations of the Veerman Committee (2008)."* Hence, the cabinet is *"responding"* (rather than e.g. *"implementing"*), positioning the cabinet as distinct from the committee and in a position to judge its conclusions. However, the DP still borrows some fundamental frame elements

from the DC's framing: *"To protect our county now and in the future against high water and drought, that is the main goal of the first Delta Programme .... We measure and know that the temperature and sea level are rising, that the soil is subsiding and that extreme weather events are further increasing."* Although their cause is left unspecified, all these elements of concern appear to be directly borrowed from the DC's framing. Probably the strongest rhetorical connection between both framings is the timeframe used. Although the DP distances itself from the climate change issue, referring to causes, knowledge and governance modes which are more in line with the here-and-now framing of RvR, it still employs the rather unique long timeframe introduced by the DC. Although it drops the worst-case climate scenarios and dramatic figures, the longer timeframe is aligned with a new context: in the middle of an economic crisis, flood safety is framed as a national problem affecting future economic prosperity.

## 2.6 Conclusion and discussion

The first research question addressed in this paper concerned how three key policy proposals publicly frame the flood safety issue. With respect to the role of climate change in framing flood safety, we observe this being mentioned in the RvR policy line as a secondary issue, complicating the central issue of insufficient room for the river. We can clearly distinguish how the rising attention on climate change is reflected in the public announcement of the Delta Committee's recommendations, wherein the issue is used to stress *urgency*, *national scaling* and *long-term future* orientation. After the media and political attention on climate change faded, the concept remained remarkably absent from the presentation of the Delta Programme. What remained in the flood safety framing was *national scaling* and *future* orientation – this time, however, aligned with future economic prosperity and with the possibility of delay.

Focusing on our second research question, we conclude that, according as different frames were developed, different scientific knowledge was mobilised. In line with the notions of Turnhout et al. (2008) and Turnpenny et al. (2009), this may indicate that knowledge was selectively used to enforce the relevant frame. Although climate science did not change substantially between the Delta Committee and Delta Programme, the Committee largely depended on global climate science in explaining its proposed policies, whereas the Delta Programme made its case for similar policies with various kinds of more national-oriented knowledge, omitting to mention international climate science (cf. Hulme, 2010). Apparently, knowledge is employed as a discursive resource.

With respect to our third research question, we found a clear disconnection between the Delta Committee's framing and the earlier spatial turn as represented in the RvR framing. Different knowledge is employed, and a new exogenous phenomenon is introduced to legitimise this disconnection. The partial reconnection to the RvR frame by mentioning the importance of the RvR policy line shows the balancing act of the publicly framed announcement. Once climate change faded from the media and politics, the Delta Programme announcement disregarded the issue and disconnected itself from the previous announcement by explicitly "responding" to the

Delta Committee's framing and explicitly referring to different knowledge. However, again the disconnection is only partial: the policy proposals and longer timeframe introduced by the Delta Committee remain, and are reworked into a new frame.

### *2.6.1 Towards explaining the described frame developments: puzzling and powering over flood safety*

Having analysed the frame developments of three public policy announcements, we realise that our method has focused only on the publicly announced flood safety frames. Explaining the dynamics behind the frame developments is beyond the scope of this paper. However, our results do provide some clues about what might be happening off-stage. Referring back to our theoretical considerations, we know that issues like flood safety in light of climate change are not a well-defined technical issues (Lach et al., 2005; Lazarus 2008; Adger et al., 2009; Hulme, 2009; Giddens, 2009). The uncertainties in the knowledge base, ambiguity about the seriousness of the problem and the involvement of different publics make the issue rather wicked. In addition to these widely studied characteristics of policy-making in light of climate change this paper shows how this wickedness crystallises in different meanings over time. From a distance, we can see the contours of a pattern in which the public announcements of flood safety policies not only represent an ideational struggle over uncertainty, but may represent a strategic struggle too. Heclo (1974) wrote about this duality in sensemaking dynamics over long-term wicked problems (e.g. welfare state development) as an interplay of *puzzling* over ambiguity and *powering* over interests.

Given the firm claims presented by the Delta Committee regarding sea level rise and climate change, and the climate science it employed, it appears that the concept of a changing climate took a prime role in the puzzling (Heclo, 1974) over flood safety in 2008. However, Heclo's notions of puzzling and powering suggest that both activities are interrelated; puzzling over ambiguity involves power play over who determines the puzzle, and powering over interests needs puzzling over a plausible storyline. Hence, this interplay suggests that the puzzling over climate change might also have had an empowering effect on the policy initiative. This would suggest that powering for support for far-reaching measures and governance arrangements is sought in a process of puzzling with worst-case scenarios, long timescales, national scale frames (cf. Lieshout et al., 2011), and dramatic "survival" frames comparable to what Warner (2008) has called a "logic of war." This logic frames flood safety as an issue of national security whose importance goes beyond the normal political process, allocating power to a central national authority. Whereas actual disasters are usually used as the reason for this logic, the committee appears to use the future drama derived from puzzling over worst-case scenarios and long timescales as their discursive resource.

This specific puzzling changed when the context changed. With climate change fading in the media and disappearing from the programme for government, we showed how new knowledge was employed and a different problem frame was presented. The new puzzle shifting away from the drama towards continued economic prosperity and wealth in the future might have enabled

a powering strategy well suited to the new context of an economic crisis. Furthermore, the long timescale remaining in the Delta Programme's puzzle might have given room for a stepwise implementation with budget cuts high on the political agenda in 2010. Measures were needed but, given the long timescale of the issue, the Delta Programme claimed to have time for proper timing of measures: "not to take too many ... nor too few, not ... too early, nor too late." Hence, the timing suggests that future framing may be a puzzling vehicle for creating political room for manoeuvre.

Hence, one reason for the framing differences of the Delta Committee and of the Delta Programme may be found in the Delta Programme puzzling differently over climate change facing a different societal context. Another possible explanation for this divergence may be the different institutional contexts agenda setters have as compared to policy designers. Presenting clear-cut, top-down national policies might work well for the agenda setter (the Delta Committee) in the context of national government and parliament. For the policy designer (the Delta Programme) however, success is dependent on the amount of support the programme gets for its policies from a range of powerful actors in the region. Even though the Delta Committee's vision was rather successful and uncontested, the policy designer may anticipate that the message will become controversial if it is translated into NIMBY policies.

This may also be illustrated by the recent debate that flared up in relation to one particular recommendation of the Delta Committee: the construction of Delta Dykes.[3] The leader of the high-end scenario study commissioned by the Delta Committee makes a plea for the construction of breach-resistant super levees, the so-called Delta Dykes, to anticipate unexpected extreme circumstances in the future. The leader of the Delta Programme, however, responds by resisting this top-down engineering framing. By referring to the Netherlands as a "coalition-country," he stimulates bottom-up initiatives and participation, in line with the *poldering* tradition.

Although these suggested puzzling and powering dynamics behind the frame developments analysed in this paper remain rather hypothetical, they do indicate that the concepts of puzzling and powering may represent useful theoretical contributions for analysing flood safety governance in times of climate change. Close study of the front-stage and back-stage actions and interactions in the policymaking process will be required to make stronger claims about how powering and puzzling leads to frame developments.

3 See www.waterforum.net articles: Rapport PBL: Deltadijken zijn veel veiliger [Report NEEA: Delta Dykes are much safer] 28 September 2011; De deltacommissaris hoeft niet per se verrassend te zijn [The Delta commissioner does not necessarily have to be surprising] 28 September 2011.

# Chapter 3

## The Role of knowledge and power in climate change adaptation governance; a systematic literature review[4]


### Abstract

The long-term character of climate change, the high costs of adaptation measures in combination with their uncertain effects turn climate adaptation governance into a torturous process. In this paper we systematically review the literature on climate adaptation governance to analyse the scholarly understanding of these complexities. Building on governance literature on long-term and complex policy problems we develop a conceptual matrix based on the dimensions 'knowledge' and 'power' to systematically review the peer-reviewed literature on climate adaptation governance. We find that about a quarter of the reviewed journal articles does not address the knowledge or power dimension of the governance of climate change adaptation, about half of the articles discuss either the knowledge or the power dimension, and another quarter discusses both knowledge and power. The articles that do address both knowledge and power (1) conceptualise the governance of climate adaptation mainly as a complex system of regulatory frameworks and technical knowledge; (2) assume that regulatory systems can be easily adapted to new knowledge; (3) pay little attention to fluid or unorganized forms of power (e.g. negotiation) and knowledge (e.g. learning) and largely neglect the interplay between the two. We argue that more research on this interplay is needed and discuss how puzzling and powering are a promising pair of concepts to study this.


4 Published as: Vink, M. J., Dewulf, A. R. P. J., & Termeer, C. J. A. M. (2013). The role of knowledge and power in climate change adaptation governance: a systematic literature review. Ecology and Society, 18(4), 46.

## 3.1 Introduction

Although scientific attention for climate change has been steadily growing over the last decades, media attention and policy attention have been much more erratic (Boykoff 2012, Vink et al. 2012). The more recent rise in scientific attention for adaptation to climate change as a governance challenge, requiring actions on the part of civil society, business and particularly government, has not led nation states to unconditionally implement climate adaptation policies (Repetto 2008, Biesbroek et al. 2010, Keskitalo 2010, Berrang-Ford et al. 2011, Ford and Berrang-Ford 2011, Wolf 2011). This seems at odds with a majority of climate change adaptation governance (CCAG) literature specifically stressing the need for state intervention (Biesbroek et al.). Evidently, a growing body of scientific knowledge does not of itself lead to growing consistency in societal attention, political commitment and state interventions.

As a quintessential long-term policy problem, the governance of adaptation to climate change relies on knowledge about long-term climate change impacts, and this knowledge is ridden with uncertainties. In addition, this long-term character implies multiple policy cycles before impacts materialize and before the effects of adaptation measures can be evaluated. This makes decision-making over adaptation to climate change prone to controversies about the knowledge base and political conflict about interests and priorities (Lazarus 2008, Hovi et al. 2009, Lempert et al. 2009). Some have referred to climate change adaptation as a "wicked problem par excellence" (Rittel and Webber 1972, Lazarus 2008, Davoudi et al. 2009, Jordan et al. 2010), which cannot be precisely formulated or solved due to widely diverging problem formulations and vested interests. In line with this wicked character others have stressed the complexities that come with monitoring and evaluating the progress of adapting to climate change (Ford et al. 2013). Accordingly, the governance of adaptation to climate change might be characterised by (1) inherent uncertainties given the long-term character of this policy issue; (2) the involvement of many interdependent actors with their own ambitions, preferences, responsibilities, problem framings and resources; and (3) the lack of a well-organised policy domain enhancing and monitoring climate adaptation on the policy agenda (Termeer et al. 2013, Ford et al. 2013).

In view of the characteristics making CCAG a quintessential long-term policy challenge, we review the broad literature on the governance of climate change adaptation to see whether and how the abovementioned complexities are studied and theoretically understood. We present an exploratory systematic literature review of articles in international peer-reviewed scientific journals on the governance of adaptation to climate change. Guided by literature outside the field of CCAG on long-term policy problems the review is focused on how knowledge organisation and power organisation are addressed in this literature.

In the following section we start with theoretical considerations on the role of knowledge and power, both in organised and unorganised forms, in long-term wicked problems. After formulating the specific research questions for our review, we explain our methodological approach to selecting and categorizing the literature. In the results section we present a quantitative and qualitative analysis of the literature categorised according to the conceptualization of knowledge and power in

climate change adaptation governance. In our final section we discuss how the concepts of puzzling and powering in combination with interactional framing might be helpful in better understanding the understudied interplay of unorganised forms of knowledge and power in climate adaptation governance processes.

## 3.2 Theoretical framework



Although some impacts of anthropogenic climate change are already visible (Parmesan and Yohe 2003, Füssel 2009) most impacts are to be expected in the future (Solomon 2007, Rockström et al. 2009). And even though current climate adaptation policies try to anticipate todays risks for natural disasters (Field et al. 2012) or future climate impacts through making no-regret investments now (Fankhauser et al. 1999, Heltberg et al. 2009) or through mainstreaming adaptation goals in current policies (Smit and Wandel 2006, Swart and Raes 2007) CCAG goals and intentions generally aim decades ahead. Where policy cycles generally imply a four to six year time frame, the long time horizon of a changing climate makes policy results become real only multiple policy cycles ahead. This implies an extraordinary scope for policymakers whose political success normally depends on policy impacts at the end of each policy cycle. In addition this long-term perspective makes CGAG depend on intrinsically uncertain knowledge. Not only climate models come with intrinsic uncertainty about the timing and severity of climate impacts, also the future characteristics of society are intrinsically unknowable. At the same time, although the future is unknown and unknowable, it will not crystallize in random forms (Asselt 2010). Current policy decisions, resource mobilisation, infrastructural decisions and regulations may have serious consequences for future reality. However, the role of these decisions, and the context in which the current decisions will play out is intrinsically uncertain and may be valued differently by different people, at different times.

This ambiguity in assessing future impacts of current policy decisions poses specific challenges to policymakers. Challenges which not only yielded a history of techniques and methods for creating plausible scenarios or models about the future (Wells 1902, Jouvenel 1967, Thompson et al. 1992, Adler 1996, Ferri et al. 2006, Masini 2006, Asselt et al. 2007, Klooster 2008, Asselt 2010) but also sparked a debate on the implications of uncertain knowledge about the future, especially in relation to its ambiguous societal understandings. Scholars have empirically studied the limited role of uncertain knowledge in policymaking over long-term issues (Dammers 2000, Steen 2009, Boezeman et al. 2010) as well as theoretically addressed the 'wicked' or 'unorganised' character of policy problems with uncertain knowledge in combination with ambiguous societal problem definitions, goals or values over time (Rittel and Webber 1972, Hisschemöller and Hoppe 1995, Lazarus 2008).

Not only organizing the required knowledge for CCAG is a daunting task, organizing the necessary power to get things done is challenging as well. Political success or failure, competing values, conflicting interests all form part of what policymakers should reckon with. In studies of quintessential long-term issues like macro-economic reform and welfare state reform this complexity

in policymaking is understood as a duality of organising knowledge about uncertain and ambiguous issues, and organising power amidst conflicting interests and goals (Hall 1993, Majone 1996, Visser and Hemerijck 1997, Culpepper 2002, Heclo 2010). When studying the role of knowledge and power organisation, we need to consider both the organised and unorganised forms of knowledge and power. Not only the role of agents in creating, changing or conflicting about knowledge and power is important (Sabatier 1987, Sabatier 1988, Hall 1993, Heclo 2010), but also the role of organisational arrangements like models and institutions as (temporary) crystallisations of past learning and negotiation processes (Dyson 1980, Scott 1987, Mahoney and Thelen 2010). These distinctions yield four categories that will guide our systematic review of the CCAG literature.

### *3.2.1 Organised knowledge*

In view of an uncertain future, policymaking may rely on models or scenarios drawing plausible pictures of how the future might look like (Asselt 2010). These forms of knowledge can be considered crystallisations of complex processes of knowledge development (Jouvenel 1967, Masini 2006, Klooster 2008). In fields like public health these processes are often structured using statistical methods referred to as Monte Carlo simulation (Thompson et al. 1992), or expert-based consensual approaches like the Delphi method (Adler 1996, Ferri et al. 2006). Once a certain amount of consensus has been reached among experts, knowledge will be formalised or crystallised in written or modelled form. As long as consensus holds, these organised forms of knowledge can be considered rather static and represent building blocks for policymaking (Asselt 2010). In the context of climate adaptation the role of climate impact models in governing climate adaptation is often stressed as important for understanding the need for adaptation (Moss et al. 2010) and generally relies on the climate scenarios in combination with socio-economic scenarios presented in the IPCC reports (IPCC 2007).

### *3.2.2 Unorganised knowledge*

Before knowledge crystallizes in models, scenarios or technologies, experts and stakeholders will puzzle over what is actually at stake, or may work towards agreement on a certain model of (future) reality. This knowledge-in-the-making may be manifested in unorganised forms like learning, sharing knowledge, making sense, framing or deliberating over the nature of the problem (Hall 1993, Schön and Rein 1994, Culpepper 2002, Heclo 2010). While agreement is still to be found agents interactively work towards agreement or build upon earlier forms of agreement (Dewulf et al. 2009). Once agreement is reached and formalised in models these formalisations may also be questioned again or changed after new knowledge comes to the fore. Hence, organised forms of knowledge are essentially temporal and may be altered by unorganised forms of knowledge like learning or deliberation among users of the models or experts who formalised the models out of earlier unorganised forms of knowledge.

### *3.2.3 Organised power*

In view of changing future circumstances CCAG has to achieve societal goals, often guided by (un)organised forms of knowledge. Therefore governance needs power to get things done (Hall 1993, Culpepper 2002, Heclo 2010). A rather explicit form of power in governance may be the law, or other institutions that -once politically agreed upon- arrange society according to certain goals or procedures. Hence, formal organizations, climate acts, official agreements, regulations, or state officials represent organised forms of power in governing society towards climate adaptation (Dovers and Hezri 2010). These organised forms of power are materialisations of previous negotiated outcomes over societal goals, values and means, but may change again once societal goals are renegotiated or specific agents strive for change and reach a new equilibrium (Dyson 1980, Scott 1987, Mahoney and Thelen 2010)

### *3.2.4 Unorganised power*

Not all power is explicitly organised. During the process in which power gets organised in form of regulations or institutions power manifests itself in unorganised forms like negotiations or power play between parties or coalitions striving for conflicting goals interests or values (Sabatier 1987, Majone 1996, Heclo 2010). Agents negotiate over who gets what or which issue is more important than other issues. In addition agents may strive for support or build coalitions to gain power in a power play for getting things formalised. This power play may build upon existing power organisation like institutions, official positions or regulation, but may also challenge those power structures. New power structures may appear after the power play has stabilised, as new agreed-upon goals formalise in new institutions or regulations (Sabatier 1987, Sabatier 1988, Hall 1993, Heclo 2010).

## 3.3 Research questions

The question rises how the scientific literature on climate change adaptation governance makes sense of this organised and unorganised forms of knowledge and power and their combinations. This brings us to our research questions: (1) *to what extent* are the organised and unorganised forms of knowledge and power and their combinations discussed in the CCAG literature?; and (2) *how* are organised and unorganised forms of knowledge and power and their combinations *conceptualized* in CCAG literature?

## 3.4 Methodological approach

To answer the two research questions, this papers conducts an exploratory systematic review of the peer-reviewed climate adaptation governance literature. In line with the climate adaptation

literature review by Berrang-Ford et al (Berrang-Ford et al. 2011) and the general considerations on systematic literature reviews by (Tobi 2010) our systematic approach does not aim to cover all literature available, but due to its systematic approach provides a proxy or indication of what approaches to knowledge and power exist in CCAG literature. Therefore we make use of both quantitative and qualitative literature analysis giving insight in the relative amount of literature available on the various approaches and the theoretical conceptualisation of knowledge and power in these approaches. For the development of the categories for this analysis we refer back to the broader theoretical considerations presented in our theoretical section.

### *3.4.1 Categories for analysing knowledge and power in CCAG*

Starting from the general knowledge and power dichotomy we defined two dimensions on which to review the literature. Following the general concepts discussed in our theoretical framework we defined a matrix in which the Y axis represents the dimension of knowledge in CCAG, and the X axis represents the power dimension in CCAG. We subsequently subdivided the dimensions of knowledge and power in organised and unorganised knowledge and power. Because of the possibility that climate adaptation governance literature discusses only knowledge aspects or only power aspects of the governance process, we added these categories to our matrix. We consider it ontologically impossible that power or knowledge play no role at all in actual CCAG processes, but it is possible that these dimensions are not discussed in particular publications. The matrix is presented in figure 3.1.

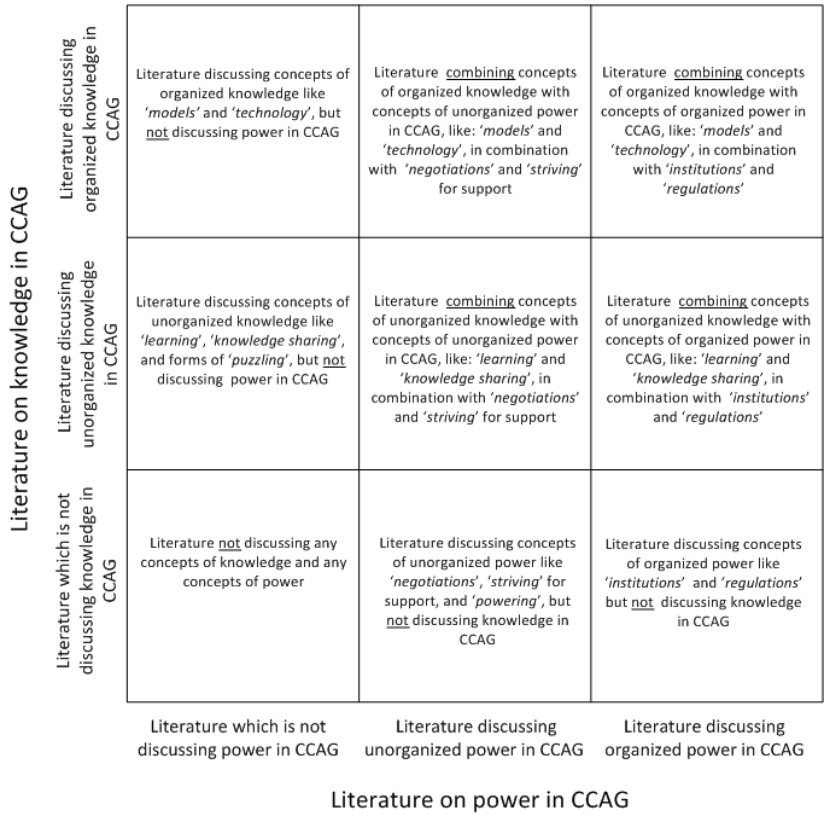
### *3.4.2 Literature selection*

The combination of the three categories on each axis (unmentioned, unorganised, organised) results in nine cells for allocating literature. For the selection of literature we searched the Scopus scientific database for peer-reviewed articles on CCAG. We developed search queries with keywords and synonyms for each category on the x and y axis based on the literature discussed above. We applied an iterative approach in developing search queries to be sure not to include irrelevant or exclude crucial literature. Based on a combination of literature selections with keywords that fit the categories on the x and y axis each cell represents a sub-selection of CCAG literature. For a list of search queries with keywords we refer to Appendix 1.

### *3.4.3 Quantitative analysis*

After selecting the literature based on our knowledge and power categories we quantitatively analysed the distribution over the cells. We focused on the number of articles, year of publication, and the number of citations of the articles in each selection. Based these quantitative characteristics we drew conclusions on the relative amount of articles per selection or cell, whether the articles were

**Figure 3.1. Analysis matrix based on conceptualizations of knowledge and power. CCAG = climate change adaptation governance.**




relative recent or not, and whether the articles where relatively cited well or not.

### *3.4.4 Qualitative analysis*

Because our specific focus is on the approaches in literature discussing the combination of knowledge and power we subsequently analysed qualitatively how the different selections of CCAG literature conceptualise the 4 combinations of unorganised and organised knowledge and unorganised and organised power. Because we aim to provide a proxy or indication of the approaches in literature, we reviewed the first 10 most cited articles out of the literature selections that appeared relevant and not false positive to our selection criteria (e.g. 'power' as in 'power plant'). For structuring this qualitative analyses we used the following questions:

1. Are the categories of knowledge and power being studied theoretically or empirically?
2. At what governance scale are the categories conceptualised in CCAG?
3. How are knowledge, power and the interplay of both conceptualised in CCAG?

The answers to those questions are listed per reviewed article in table 1- 4 in Appendix 2. The tables enabled us to draw conclusions on the general conceptualisations of the combinations of knowledge and power, the governance scale at which most conceptualisations are focused, and to what extent the conceptualisations have led to coherent theoretical approaches to the knowledge power interplay in CCAG.

### *3.4.5 Methodological limitations*

The systematic approach of our review aims to yield a comprehensive analysis of the approaches in CCAG literature to knowledge and power. However there are some limitations to be considered in systematic literature reviews. Although selecting English-language peer-reviewed articles in Scopus enhances the scientific quality and soundness of the reviewed approaches, there might be non-scientific, semi-scientific or non-English literature representing insights we currently miss. In addition our focus on the Scopus scientific database might limit the completeness of our search since other databases like Web of Science might have yielded additional literature (c.f. Biesbroek et al. , Petticrew and Roberts 2008). However, the aim of our review is not to provide a full overview of the existing literature, but to be read as a proxy of the existing approaches in literature (c.f. Berrang-Ford et al. 2011), which is well represented in the Scopus database.

## 3.5 Quantitative analysis of the selected literature

The quantitative results are presented in Figure 3.2. The number in each cell represents the number of articles that appeared in the literature selection. The figures in bold represent the articles that include a combination of knowledge and power conceptualisations, which we therefore consider of special importance for qualitative in-depth reviewing.

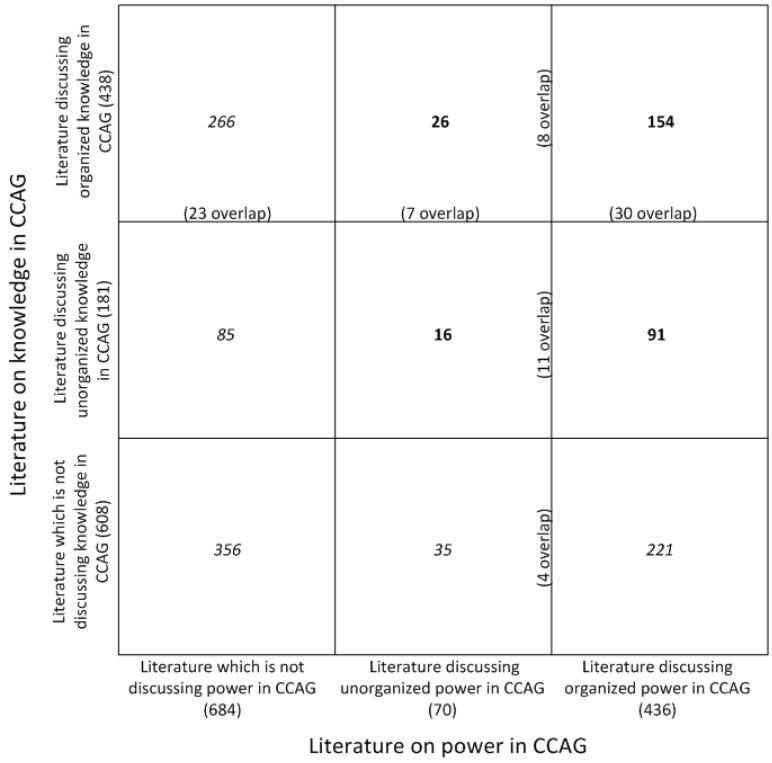
### *3.5.1 Quantitative analysis of literature on knowledge and power in CCAG*

Looking at the total number of articles for each of the categories on the x and y axis, important differences can be noted. Of the 1132 articles accessed on 3 December 2012, more than half are not addressing knowledge (608), and more than half are not addressing power (684) in relation to CCAG. Although smaller, the selection of literature discussing organised knowledge like models and techniques (438), or organised power like institutions and regulation (436) is still relatively large. Compared to these larger selections of literature, literature discussing unorganised forms of knowledge like learning (181) or unorganised forms of power like negotiation (70) is only meagrely represented in our total selection of CCAG articles.

These differences are striking because we selected the literature for unorganised forms of knowledge and unorganised forms of power on the basis of a relative large number of synonyms. However, these

unorganised forms of knowledge and power still appear to be underrepresented in the total number of selected articles. Especially the number of articles addressing the unorganised power element, where CCAG is approached as a product of negotiations over values and interests, appears to be limited (70).

**Figure 3.2. Quantitative analyses of climate change adaptation governance (CCAG) literature. (total number of articles selected = 1132)**




### *3.5.2 Quantitative analyses of literature on either knowledge or power in CCAG*

In line with the general variety in literature addressing knowledge or power in CCAG, we see a relative large variety in the number of articles specifically focusing on either knowledge -without mentioning any form of power, or vice versa. Literature specifically focusing on unorganised power without mentioning any form of knowledge (e.g. CCAG as negotiating) is relatively under represented (35). Striking is the difference with literature specifically addressing unorganised knowledge (e.g. CCAG as learning) which is still under represented but more than double the amount (85) of literature addressing unorganised power. Literature focusing on organised power without mentioning knowledge (e.g. CCAG as only institutions and regulation) is over represented (221), as well as literature focusing on organised knowledge without mentioning any form of power

(266), and literature not mentioning any form of knowledge and power (356) Apparently CCAG is mostly represented as either a matter of models and technologies, or a matter of institutions and regulation, or as neither any form of knowledge or power.

### *3.5.3 Quantitative analyses of literature combining knowledge and power in CCAG*

Literature on the combinations of knowledge and power organisation reveals an even larger variety. The articles combining unorganised power and unorganised knowledge (e.g. CCAG as a combination of negotiating and learning) is only meagrely represented (16). In addition a closer look reveals that the articles are relatively recent (all after 2007 of which half are published in 2012), and relatively little cited compared to the other selections; only one article is cited more than 5 times of which the most cited article 22 times (Scopus 2012). The same counts for the literature on unorganised power in combination with organised knowledge (e.g. CCAG as a combination of negotiating with models & techniques). This selection only counts 26 articles, which are very recent (all after 2009 and half in 2012) and are not well cited yet; only 3 more than 5 times of which the most cited article 12 times (Scopus 2012). For all sub selections a computed H-factor is presented in Annex 1.

Focusing on the combination of unorganised knowledge with organised power (e.g. CCAG as a combination of learning with institutions) shows a different picture. 91 articles which are still rather recent, (all after 2001 and half after 2011) but cited a lot more; 29 articles more than 5 times, of which the most cited article 272 times (Scopus 2012). The combination of organised knowledge with organised power (e.g. CCAG as a combination of models with institutions) yields the largest number of articles (154), which are oldest (all after 1996, half after 2010) and most cited: 45 are cited more than 5 times, of which the most cited article 272 times (Scopus 2012). For all sub selections a computed H-factor is presented in Annex 1.

The matrix also shows overlap between the different literature selections. A number of papers does fulfil more than one of our queries and is included in more than one selection (e.g. Addressing a combination of learning, negotiation, and institutions in CCAG). This overlap appears to be relatively small for the organised knowledge in combination with organised power literature selection. However, especially in relation to the few articles discussing unorganised power and unorganised knowledge in CCAG, the overlap consists of more than half the articles. Apparently only a very small number of articles solely discusses the combination of unorganised forms of knowledge and unorganised forms of power in CCAG.

## 3.6 Qualitative analysis of the selected literature

### *3.5.1 Organised knowledge and organised power: the system assessment approach*

Most articles in this selection discuss national-level case studies. Some articles discuss forms of

organised knowledge and organised power as central in CCAG (Mills 2005, Tompkins and Adger 2005, Challinor et al. 2007). In all articles selected CCAG is pictured as a rather static 'system' in which for example institutions or regulation and models and techniques play an important role (Easterling 1996, Sanders and Phillipson 2003, Allman et al. 2004, Mills 2005, Tompkins and Adger 2005, Belliveau et al. 2006, Challinor et al. 2007, Tyler et al. 2007, Biesbroek et al. 2010, Ford et al. 2010).Only a few articles discuss how these organised forms of knowledge and power may interact, for example by the influence institutions may have on techniques (Tompkins and Neil Adger 2005) or vice versa (Sanders and Phillipson 2003). Almost all articles conceptualise the two dimensions separately and assess how they independently influence a governance system's vulnerability or sensitivity to a changing climate. The type of governance systems discussed varies from agriculture and livestock (Easterling 1996, Belliveau et al. 2006, Challinor et al. 2007, Tyler et al. 2007), insurance and societal damage (Sanders and Phillipson 2003, Mills 2005), health governance (Ford et al. 2010) or more general governance of public goods (Allman et al. 2004, Tompkins and Adger 2005, Biesbroek et al. 2010).



In general we may conclude that this sub-selection of literature addressing knowledge and power in CCAG represents a rather homogenous group of articles in their approach to CCAG which is well balanced in terms of empirical research versus more theoretical research. Because these articles assess rather static elements in governance systems in view of a changing climate, their approach may be described as a '*system assessment approach*'. In this approach organised knowledge and power are often considered independent parameters and accordingly their interplay is not being elaborated.

### *3.5.2 Unorganised knowledge and organised power: the adaptive capacity approach*

Most articles in this selection discuss national-level case studies or local case studies dealing with national governance (Shackley and Deanwood 2002, Tompkins 2005, Nelson et al. 2008, Tompkins et al. 2008, Dougill et al. 2010). A majority of articles discusses forms of unorganised knowledge and organised power as central in CCAG (Tompkins 2005, Nelson et al. 2008, Pelling et al. 2008, Tompkins et al. 2008, Pahl-Wostl 2009, Dougill et al. 2010, Dovers and Hezri 2010). However, different from the static 'system assessment approach' discussed before most articles discuss institutions and regulation as the context for a process of change through learning or sharing of knowledge. This process is conceptualised as institutional learning (Shackley and Deanwood 2002, Pelling et al. 2008, Tompkins et al. 2008, Pahl-Wostl 2009, Dougill et al. 2010, Dovers and Hezri 2010) which may lead to adaptive capacity (Tompkins and Neil Adger 2005, Nelson et al. 2008, Gupta et al. 2010) or institutional resilience (Tompkins 2005). Case studies address similar issues as in the previously discussed selection (Tompkins 2005, Nelson et al. 2008, Tompkins et al. 2008), but the majority has a more general approach to governance not specified to a specific policy domain (Shackley and Deanwood 2002, Tompkins and Adger 2005, Pelling et al. 2008, Pahl-Wostl 2009, Dougill et al. 2010, Dovers and Hezri 2010, Gupta et al. 2010).

In general we can say that the literature which appeared in our selection is well balanced between

empirical and theoretical research, and shows a rather consistent conceptualisation of unorganised knowledge and organised power in CCAG in the form of a process of institutional learning leading to adaptive capacity or resilient systems. Therefore we could describe the approach to knowledge and power in this sub selection as the '*adaptive capacity approach*'.

### *3.5.3 Organised knowledge and unorganised power: the politics of technology approach*

Most articles in this selection discuss national-level case studies. Both the organised knowledge and unorganised power dimensions are mentioned as important in CCAG, sometimes even as central aspects in CCAG. However, both dimensions are referred to in a variety of ways depending on the theoretical definition and normative standpoint of choice. Often articles appear to conceptualise the combination of organised knowledge and unorganised power as the 'politics of technology'. Case descriptions are presented of how models determine technologies, and how these influence negotiation dynamics among government and stakeholders in CCAG (Carey et al. 2012). Mahony and Hulme (Mahony and Hulme 2012) further this idea by conceptualising the power which comes with knowledge structures. The authors introduce a regional climate modelling system as a new way of knowing which goes beyond the hegemonic IPCC 'way of knowing'. Therefore the authors claim that this new knowledge structure enables less powerful regions with little representation in the knowledge hegemony of the IPCC to make better use of climate models. This is where the authors link the role of organised knowledge and its implied power dynamics with better possibilities for learning which we will discuss in following sub section.

In line with this role of organised knowledge in power dynamics Underdal (Underdal 2010) discusses different governance models making use of different knowledge and power contraction or fragmentation, each model functioning best in specific conditions. Fieldman discusses the problematic relation between models, technologies and implantation due to inefficient 'boundary work' which depends on power relations (Feldman 2012). In line with this boundary work Roncoli (Roncoli et al. 2009) discuss the importance of modelling tools in combination with negotiation platforms, but conceptualises them rather separately. The interplay emerges where the authors describe how modelling tools give handles for negotiation, and how uncertainty in the modelling tool creates possible inconsistencies in framing over what is at stake. This is where the authors link up with the unorganised side of knowledge in CCAG. The authors take a normative stance in saying that framings should be towards the Integrated Water Resource Management goals. McGee and Taplin (McGee and Taplin 2009) address the role of technology as a discourse in (international) negotiations. With the introduction of discourse they go beyond the role of technology itself in negotiations and introduce a less organised form of knowledge in form of 'shared meaning'.

Altogether we can conclude that the conceptualisation of both organised knowledge and unorganised power in CCAG is not common in CCAG literature, not uniform, and rather recent. Probably the best way to summarise the variety of conceptualisations of organised knowledge and unorganised power is '*the politics of technology*', where technologies and models have an influence on,

and are strategically being employed in negotiations at all levels of concern.

### *3.5.4 Unorganised knowledge & unorganised power: the deliberative approach*

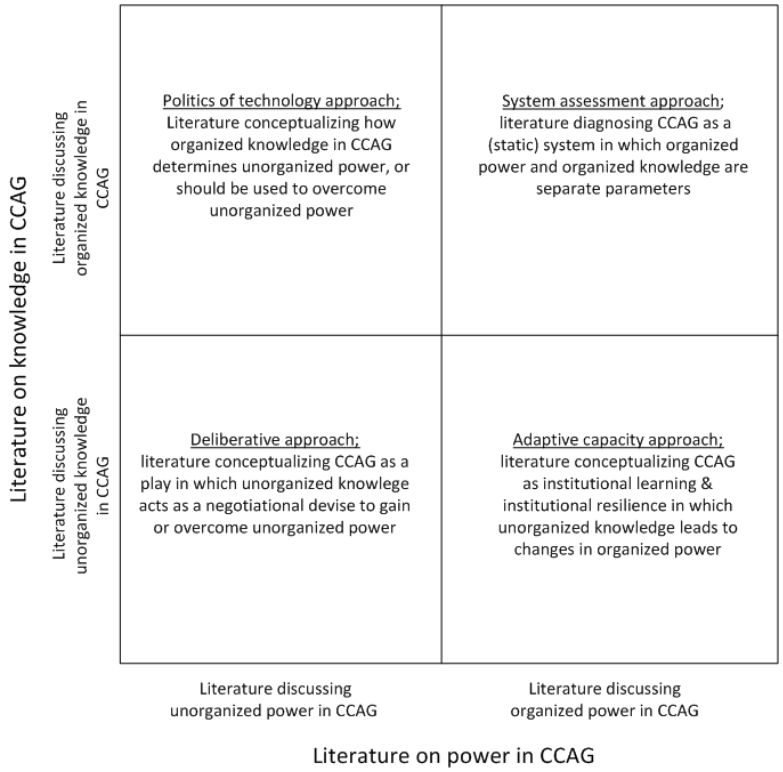
Most articles in this selection discuss either national or international-level case studies. Both unorganised knowledge and unorganised power are mentioned as important in CCAG, sometimes even as central aspects in CCAG. However, both dimensions are referred to in various forms, depending on the theoretical definition chosen. Some articles take a rather normative stance on the role of multi-stakeholder management and knowledge sharing to change or overcome existing power relations (Rojas et al. 2009, Roncoli et al. 2009, Manuel-Navarrete 2010, Feldman 2012).



In a multilateral context Brown et al (Brown et al. 2007) mention the relation between the ideational development of climate change as a 'security issue' and the effects this might have on international negotiations over supporting climate adaptation measures in Africa. In the same way Mahony and Hulme (Mahony and Hulme 2012) discuss how deliberation over organised knowledge like climate models may influence the applicability of those models in the Global South empowering countries who previously did not have a stake in the IPCC 'way of knowing'. Apparently the interplay between forms of unorganised knowledge and unorganised power is applicable to international relations studies. At the national level Vink et al (Vink et al. 2012) take up the interplay in describing the role of climate models in the development of frames in Dutch water-policymaking processes. The authors discuss the possible consequences of this framing for certain powering strategies. One article in our selection explicitly discusses learning and changing paradigms in relation to political negotiations. Via the concept of 'triple loop learning' Herrfarhdt-Pähle (Herrfahrdt-Pähle and Pahl-Wostl 2012) link learning with changing values and institutions. In an abstract sense this learning is related to sustained change in the characteristics of political negotiations over long-term issues like CCAG.

In general, we may conclude that the literature in our selection addressing unorganised knowledge and unorganised power in CCAG is rather recent and does not play a central role in the rest of the literature as the relative few citations to this sub-selection indicate. Depending on the theoretical framework there appears to exist a wide variety in conceptualisations linking ideas, frames or learning with power relations or negotiations. Some authors (Rojas et al. 2009, Roncoli et al. 2009, Manuel-Navarrete 2010, Feldman 2012) add a normative stance towards power relations in CCAG yielding more critical approaches to the role of ideas in power relations. The few articles addressing international relations in CCAG show a more coherent conceptualisation of the interplay of unorganised knowledge (ideas and frames) and unorganised power (international negotiations). Altogether this rather recent literature presenting a variety of approaches could be summarized as a 'deliberative approach' to CCAG.

**Figure 3.3. Overview of the qualitative literature analyses. CCAG = climate change adaptation governance.**




## 3.7 Discussion

### *3.7.1 CCAG as (adaptive) systems or interplaying processes?*

The majority of articles addressing knowledge and power in CCAG does so using a system assessment approach in which organised knowledge and organised power are separate parameters. This body of literature shows a rather homogenous conceptualisation of governance and covers all governance levels of concern. In the same way the literature discussing CCAG as an 'adaptive capacity' challenge shows rather homogenous conceptualisations. However, the 'politics of technology' approach and the 'deliberative approach' to knowledge and power in CCAG are meagrely represented in CCAG literature and show little consistency in their conceptualisations compared to the other two approaches. Hence, in spite of what Heclo and others have shown in their fields of research (Sabatier 1988, Bennett and Howlett 1992, Schön and Rein 1994, Majone 1996, Culpepper 2002, Heclo 2010), a large part of the CCAG literature conceptualises long-term policymaking predominantly as a matter of 'getting the system right', instead of understanding the more dynamic processes of puzzling over uncertainty in relation with powering over interests within those systems over time.

### *3.7.2 Knowledge-power interplay*

Especially the dynamic interplay between knowledge and power seems meagrely represented in our selections of CCAG literature. In the '*system assessment approach'* both knowledge and power are conceptualised as relatively static features of the CCAG system. Knowledge and power as interplaying processes remain largely unmentioned in the majority of the CCAG literature we reviewed. The '*adaptive capacity approach*' clearly shows the most consistent attention for a knowledge-power interplay. In this approach the interplay is mostly related to institutional learning where 'learning agents' are key to institutional change. However, negotiations over societal values, interests or goals underpinning the institutions remain often unmentioned in this interplay.

Because knowledge and power are not coherently conceptualised in what we call the 'politics of technology approach', the knowledge-power interplay remains rather ambiguously understood here as well. Some authors consider technology and power as separate but conflicting (Underdal 2010), others describe how technology and models may become 'handles' in negotiation (Roncoli et al. 2009) and some conceptualise the interplay as 'discourse' (McGee and Taplin 2009). These conceptualisations of the knowledge-power interplay are furthered in what we defined as the 'deliberative approach' but remain rather broadly defined in deliberation via 'knowledge networks'(Feldman 2012), processes of framing (Vink et al. 2012), 're-framing' (Mahony and Hulme 2012) or 'triple loop learning'(Herrfahrdt-Pähle and Pahl-Wostl 2012).

### *3.7.3 CCAG as interplaying processes of puzzling and powering through interactive framing*

Considering the underrepresented approaches to CCAG as a process, and the ambiguously defined knowledge and power interplay we see opportunities to further a process- based approach to CCAG by using conceptualisations in line with puzzling and powering (Heclo 2010). Although we understand that the very general concepts like puzzling and powering pose limits to their analytical strength (Bennett and Howlett 1992, Hall 1993, Heclo 2010) we believe that the concept of interactive framing might be a promising analytical tool to make this interplay graspable. Schön and Rein (Schön and Rein 1994) address the knowledge and power interplay in form of frames. Framing is a process in which facts and values merge in the form of problem-setting storylines or metaphors. Explicitly or implicitly these storylines link causal accounts over what 'is' to particular proposals for action, implying a normative leap from what 'is' to what 'ought to be'.

The interplay of knowledge and power might be understood more precisely in describing the combinations of learning over ambiguity and negotiations over values and interests in form of frame interactions (Dewulf et al. 2009) among agents making sense of what 'is' and what 'ought to be'. In the same way the role of technologies as handles in negotiations might become graspable by indicating the frames that are employed interactively in making sense of these technologies in governance processes. Whether from a normative stance or not, in this way CCAG might be described and understood as a process of interaction in which agents -strategically or not- frame (future) reality on the spot and interactively create shared meaning for rallying support.

## 3.8 Conclusion

Our first research question questions to what extent knowledge and power is being discussed in CCAG literature. First of all the relative large number of articles not discussing any form of knowledge or power, or knowledge in combination with power, is striking. In addition we can conclude that knowledge and power in the form of models, technologies, institutions and regulation are most extensively being discussed and cited as organised elements of knowledge and power in a CCAG 'system'. In more recent literature the concept of 'learning' or 'adapting' is added to this system approach, which yielded a second relative large body of literature which is relatively often cited. Unorganised forms of knowledge and power like learning in combination with negotiating are relatively recent, and little discussed in CCAG literature, which yields a body of literature which is little cited yet. Hence, CCAG is mostly being discussed as a static systems of models, technology, institutions and regulation.

In our second research question we ask how knowledge, power and their interplay are being discussed in CCAG literature. Articles discussing organised forms of knowledge and power, like models and institutions, show relative coherent conceptualisations in form of 'governance systems' which the literature generally aims to 'assess' in view of a changing climate. We therefore classified this approach to organised knowledge and power as the *'system assessment approach'*. Articles approaching unorganised knowledge in relation to organised forms of power, like learning and institutions, show relative coherent conceptualisations in the form of 'adaptive capacity', 'institutional learning', or 'institutional resilience', we therefore classified this approach as the *'adaptive capacity approach'.*

The selection of literature approaching CCAG in terms of organised knowledge and unorganised power, like models in combination with negotiating, shows limited coherence in conceptualisation. Some authors provide interesting conceptualisions of the problematic character of knowledge hegemonies in power relations but do not have a large influence on other CCAG scholars yet. We classified this approach as *'the politics of technology'* approach, as most articles address the implicit power play which comes with knowledge structures. In the same way our selection of literature approaching CCAG as unorganised knowledge and power, like learning in combination with negotiating, shows limited coherence in its conceptualisations. Authors show promising conceptualizations as triple loop learning, boundary work, discourse, and framing but appear to be pioneers in the field of CCAG literature. As most articles addresses the implicit power play which comes with the use of language, learning or framing we consider this sub-selections described best as *'the deliberative approach'*.

In addition to the variety of conceptualizations of knowledge and power, the interplay of knowledge and power in CCAG remains ambiguously understood. In line with Heclo (2010) and others, we therefore propose the theoretical lens of governance as a puzzling and powering interplay to better understand the dynamic processes of organizing knowledge and power in CCAG. Together with that, we consider the theory of interactive framing a promising tool in making the interplay between puzzling and powering graspable, possibly helping to understand the puzzling and powering that might explain the empirical complications of climate adaptation governance interventions.

# Chapter 4

## The Dutch Delta Committee as a Boundary Organisation[5]


### Abstract

Scholars stress the need to bring science and policy together for effective policymaking. This paper highlights an interesting site of co-production: the second Dutch Delta Committee. Consisting of representatives of science, politics, policy and industry, this state committee advised the Dutch government on adapting to climate change in 2008. Although the committee went beyond common climate projections and advocated non-incremental policy recommendations, its report provoked little opposition. Subsequently, its recommendations shaped institutional reform and policy development in Dutch adaptive governance. Using the concept of boundary organisations, this paper opens up the black box of the advisory process to explain the Delta Committee's functioning. We conclude that the current understanding of the effectiveness of boundary organisations tends to focus on their internal organisation. The internal processing, shaped by the deliberate composition and organisation of the committee, was indeed important for the production of useful knowledge and management of multiple boundaries. However, this was paralleled by external practices of continued interaction with a range of political, departmental, scientific and public actors in which the Committee positioned the advice. While the former mainly enabled the production of a high quality advice, the latter quested for its acceptation and legitimacy.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## 4.1 Introduction

Late 2008, the second Delta Committee presented a comprehensive vision for the long-term protection (2100-2200) of the Netherlands in the face of climate change, laid down in the '*Working* together with water' report (Deltacommissie, 2008, emphasis in original). Chaired by the well-known Dutch politician and former minister Cees Veerman, the Committee was asked to assess the impact of climate change on the Dutch coastal area and to advise on possible policy strategies to help shape the future of the Netherlands. In the response to '*Working* together with water', the Dutch cabinet endorsed this vision, making it the starting point for further elaboration and decision-making (Huizinga, 2008). Subsequently, the Committee's recommendations shaped institutional reform and policy development in Dutch adaptive governance, provoking some debate in national newspapers but meeting little opposition. This was remarkable, because the committee went well beyond the common IPCC climate projections and recommended policies that were non-incremental.

Although a linear model keeps informing common knowledge of the relation between science and policy, scholars have long stressed the need to bring science and policy together. Our understanding of the patterns of exchange and the conditions under which this exchange is effective is, however, limited (Guston, 2001). Critically examining the practices under which convergence is assumed, debated and achieved remains a challenge for science studies (Raman, 2005). The same goes for the processes in which expertise and politics are interwoven in struggles over hegemonic meaning in environmental policy (Wesselink et al., forthcoming). Boundary organisations often play an important role in the science-policy interface, notably also in climate adaptation governance (Kirchhoff et al., in press). They can be seen as sites of co-production, and are considered a particularly promising way to reconcile the supply and demand of scientific knowledge for effective action (Clark et al., 2011; McNie, 2007).

Studies on the Committee's report and the subsequent public debate thereon focus on its output, yet treat the Committee as a single agent (Van Rijswoud, 2012; Verduijn et al., 2012; Vink et al., in press). This article understands the Delta Committee as a rare find of a co-production site in the field of climate adaptation and tries to open up the black box of its advisory process. The Committee can be thought of as a place where representatives of politics, science, departmental administration and industry met for the joint production of knowledge to shape adaptation policies in the Netherlands. Here scientific assessments of climate risks were forged together with normative ideas on how to respond to these risks.

Besides the task of providing knowledge that is scientifically rigorous, boundary organisations and scientific advisory boards at large find themselves confronted with an increase in the demands for transparency, participation and democratization in western societies (Bijker et al., 2009; Nowotny, 2003). The responsiveness to these demands is often a starting point to explain the effective harmonisation of science and politics (Clark et al., 2011). Despite scholarly efforts, the question how scientific advice to policy is organised and how that affects the capacity of boundary organisations to effectively bridge politics and science has remained rather under-researched (Guston, 2005;

Lentsch and Weingart, 2011).

To contribute to the understanding of boundary organisations, we follow a qualitative approach to make a reconstruction of the practices and organisation of the Delta Committee. What practices can be observed in the production of the science based policy advice and how do these practices relate to the effectiveness of boundary organisations? This paper proceeds by elaborating the boundary organisation concept and discussing its strengths and limitations. Our methodological approach follows from this discussion. We then put the Delta Committee and its mandate in the context of the Dutch science-policy landscape, and describe the practices and social interactions through which the Delta Committee produced its advice. Thereupon we draw conclusions, reflect on the literature on boundary organisations and suggest directions for further research.



## 4.2 Boundary organisations

This paper starts from the perspective of interacting social worlds (Clarke and Star, 2008). Social worlds are defined as universes of discourse. Science, politics, a policy community or the water industry can be seen as collectives with a shared commitment to certain activities, sharing resources, norms and rationalities in going about in their businesses. When social worlds meet, agents engage in boundary work (Gieryn, 1995). By demarcating perceptible, yet contingent boundaries between these social worlds, agents strive for the legitimate cognitive authority of the collective over particular issues. With Jasanoff (1990) boundary work has been stretched not only to include demarcation, but also to focus on coordination efforts of negotiating acceptable ways of interaction and exchange between these worlds.

Advisory bodies like the Delta Committee operate in a boundary zone between social worlds. Often they are conceptualised as boundary organisations, which function as an intermediate between science and politics, facilitating the two-way flow of information (Guston, 2001; Lentsch and Weingart, 2011; Miller, 2001). Recognising the existence of cultural barriers between science and politics, these organisations are hybrids and manage hybrids, mixing elements of different worlds which are often hard to disentangle. They are responsive to, draw on and deliver translated output to members on either side of the boundary. Guston (2001) distinguishes at least three characteristics of such organisations. Firstly, both scientific and political actors, as well as professionals mediating the two, participate in these organisations. Secondly, they enable the joint production of boundary objects (Star and Griesemer, 1989), such as reports, norms or programmes. Therefore, they are places allowing for collaboration. Thirdly, operating at the frontier of different worlds, boundary organisations have lines of accountability to both worlds. These double lines should also guarantee their role of mediator.

Boundary organizations provide serviceable truths, truthful scientific knowledge aimed at serving certain policy goals (Bijker et al., 2009). Often, their output is suggested to be effectively usable when it is simultaneously perceived as *credible*, meaning scientifically adequate, *salient*, meaning

relevant and timely for decision makers, and *legitimate*, meaning acceptable to divergent set of stakeholders (Clark et al., 2011). In the same light, durable claims are considered be *epistemic*, *social* and *political* robust (Lentsch and Weingart, 2011; Nowotny, 2003). Both series of requirements refer to the merging of different social worlds' norms in a knowledge claim and to the resilience of these claims to the subsequent testing and scrutinizing across the social worlds.

While a highly generative concept, the boundary organisations concept has been criticized. Firstly, the literature directs us to look at the internal social arrangements and practices of committees (Guston, 2005; Lentsch and Weingart, 2011; Raman, 2005 ).The robustness of claims are suggested to be enhanced by practices such as reciprocal communication, mediation and translation, and by institutional features to create the systematic commitment to those practices and to stimulate members to cooperate (Cash et al., 2003). While the internal practices and organisation are important, this focus tends to overlook the back stage practices of positioning the advisory report (Bijker et al., 2009). By interacting with a dynamic set of actors (Miller, 2001), boundary organisations attune their advisory report vis-à-vis dominant actors, ideas, narratives and institutional patterns of all involved social worlds. Secondly, organising constant feedback and working in an iterative style to strengthen credibility, salience and legitimacy are considered important features of boundary organisations (Lemos and Morehouse, 2005; White et al., 2010). As the focus of boundary organisations literature is mostly on standing organisations, this raises questions whether and how iterative processes are embodied in short-term, ad hoc organisations such as the Delta Committee. Thirdly, the boundary organisation assumes two clearly distinguishable and homogenous worlds (Miller, 2001; Parker and Crona, 2012). In the Delta Committee case several worlds interact and are served. Therefore, in line with Clarke and Star (2008), we do not define a priori which worlds are relevant, but leave it an empirical question how the Committee dealt with different social worlds that it regarded relevant.

## 4.3 Methodological account

Since the back stage practices of the Committee are not necessarily open to public scrutiny, we chose for an in-depth case study (cf. Flyvbjerg, 2006). Our case concerns the whole working period of the Committee, roughly running from September 2007 until September 2008. The research object includes all the work done within the Committee as well as the interactions of its members with the 'outside world', ranging from scientific consultations to media appearances and political contacts.

The research strategy is theory informed, yet, in line with the interpretive paradigm, initially deliberately open. We do not understand the concepts suggested by the literature as an evaluative framework, but as the guiding concepts for the first phase of the research. In understanding the durability of claims, Jasanoff (1990) suggests to look at the microprocesses of negotiation. In order to better understand boundary work, it should be described in sufficient detail (Miller, 2001; Parker and Crona, 2012). We therefore provide a qualitative, thick description of the how the Committee organised the production of the policy advice, and how it dealt with the issue of 'being effective' in

its particular and self-defined context. We amended the boundary organisations concept by being sensitive to both the internal practices of deliberation, as well as to the positioning practices of the committee with its context. Furthermore, we left open which social worlds were relevant for the Committee, how it mixed elements of these worlds and how the Committee engaged in iterative practices to work on the effectiveness of its advisory report.

The most important part of the material consists of nine semi-structured interviews with members of the Committee and with members of its secretariat held between March and July 2011. The interviews lasted from 45 minutes to over 2 hours and were audio recorded. The interviews are the main source of information on the Committee's advisory practices. The first interviews were the most open. We asked what the respondents considered strong elements of the committee, how deliberation was internally organised and how the Committee dealt with different social worlds. Gradually we selected sub-cases that were exemplary in the interviews for the various practices of the Committee, e.g. the negotiation over particular boundary objects such as the high-end scenario and recommendations like the delta director or delta dikes. In the later interviews we mainly discussed these sub-cases as well as our preliminary interpretations thereof. We did a content analysis of the Committee's advisory report, its press releases and media utterances, commissioned background reports, and website. We constantly grouped and compared our interviews and documents with our initial categories in order to refine them. Furthermore, preliminary findings were compared with the scarce social scientific literature on the Committee (De Boer et al., 2010; De Vries and Wolsink, 2009; Van Rijswoud, 2012; Verduijn et al., 2012) and with commentaries on the committee in the media.

We found several, simultaneous practices of the Committee. Section 5 describes them and provides examples to illuminate the reader on the details and subtleties of boundary work. The first group of practices relates to the internal processing of the advisory report. These are the ways of organising access to relevant political and scientific fields, for internal convening and deliberation, for the management of boundaries and for reaching discursive closure. The second group of practices relate to the positioning of the Committee and its advisory report. The Committee engaged in an active debate with several social worlds. On the one hand this engagement allowed for merging and exchanging facts and values. On the other hand it enrolled important and authoritative actors backing the Committee's vision. Before we describe these practices, we first need to briefly sketch the Committee and its context.

## 4.4 Contextualising the Committee

### *4.4.1 Appointment of the Committee*

In September 2007, the Dutch cabinet appoints the 'Committee on Sustainable Coastal Development', more often referred to as the (second) Delta Committee or the Veerman Committee after its chair, to advise on the long term protection of the Dutch coast. A ministerial decree

specifies the Committee's mandate (see pp 101-104 of the report).The formal argumentation for its establishment is the confrontation of the Netherlands with climate change combined with a strong growth of population and accumulated economic value, and a lack of a strategic vision to anticipate on the consequences of climate change on the Dutch coast.

The Dutch Advisory Bodies Framework Act regulates advisory committees. It specifies rules for composition, functioning, decision-making and cabinet response. Members need to be experts in the advisory topic and have societal experience. The Delta Committee consists of representatives from politics, science, engineering and civil service, some with an explicit political affiliation (see Table 1). The law requires that decisions are agreed upon by at least the majority of members. A disagreeing member can add a memorandum specifying its stance on the committee's report. Law grants the Committee importance and pertinence, offers manoeuvrability yet also confines its practices.

**Table 4.1. members of the Delta Committee**

| Member | Member's background |
|---|---|
| Cees Veerman (chair) | Former minister of agriculture and nature, prominent Christian democrat politician, chair of various committees, professor |
| Ineke Bakker | Former DG (spatial planning) at the ministry of the environment |
| Jaap van Duijn | Board of directors Robeco investment bank, professor of investment theory |
| Louise Fresco | Professor of sustainable development in an international perspective, former assistant DG (agriculture) and research director at FAO |
| Andries Heidema | Mayor of Deventer, politician for Christenunie |
| Pavel Kabat | Professor of earth system sciences, chair of (climate) research programmes and member of several advisory committees |
| Tracy Metz | Publicist and journalist on spatial issues |
| Koos van Oord | CEO of a dredging and marine engineering company |
| Marcel Stive | Professor of Coastal Engineering and member of various advisory committees on water issues |
| Bart Parmet (secretary) | Responsible for research, communication and preparation of the advice |

### *4.4.2 Position of the Committee in the science-policy arrangement*

The Delta Committee had to position itself vis-à-vis an historically grown constellation. As elsewhere, the discussion on adaptation and its subsequent policies entered the Dutch political agendas later than mitigation (Biesbroek et al., 2010). The first comprehensive National Programme for Spatial Adaptation to Climate Change (ARK) was formulated in the second half of the 2000s. However, attention for adaptation was present in sectoral policy before. The Netherlands is a densely populated and flood-prone delta, and its water policy is of major importance. Climate adaptation is therefore highly 'watercentric' (Swart et al., 2009).

Generally, the interactions between the political debate, policy development and climate science are strong in the Netherlands (Swart et al., 2009) and individual scientists play a prominent role as boundary workers. The Committee operated amidst a science-policy arrangement containing several knowledge institutes, dedicated research programmes and advisory bodies. The Committee could therefore build upon, yet also had to be sensitive to, an advanced inventory of regionalized scenarios, adaptation options, earlier advisory reports and applied research on climate change and

water management.

### *4.4.3 Output of the Committee*

In September 2008, the Delta Committee presented '*Working* together with water', encompassing its comprehensive vision on how the Netherlands could be made climate proof on the long term, while remaining an attractive country (outline also in Kabat et al., 2009). The report contains many images and is structured around a narrative readable for non-experts. Its publication was accompanied by a video, a website, commissioned background reports and a media strategy to communicate with the public at large. The committee presents twelve recommendations to elaborate its vision and set the agenda for further policy development. The recommendations can be split into two parts. The first part concerns physical policies, such as beach nourishments of 85 million m3/year of sand, increasing safety levels with a factor 10, the construction of breach-resistant super levees labelled 'Delta Dikes', and creating space for water storage. The second part concerns institutional recommendations. The Committee pleaded for the appointment of a Delta director, who is anticipated to develop policies in a new series of Delta programmes, to be backed by a new Delta Act and Delta Fund fed with an annual de-budgeted 1 to 1.5 billion Euros until 2100 (sic!). Especially the institutional recommendations had a clear impact. Shortly after the presentation of the advisory report, a Delta director was appointed and large scale Delta policy programmes were initiated following the lines of the Committee's advice. January 2012 the Delta law came into force, providing the legal basis for the fund (Vink et al., in press).

The Committee carefully worked on creating a sense of urgency. It presented a scientific assessment exploring a worst-case climate change scenario. Following an additional commissioned study that went beyond the IPCC '07 assessments or the KNMI '06 scenarios (published later as Katsman et al., 2011), the committee saw a local sea level rise for the Dutch coast of 0,65 to 1,30 meters in 2100 and 2 to 4 meters in 2200 as plausible. In contrast, the KNMI '06 scenarios projected 0,35 up to 0,85 meters for 2100, without autonomous soil subsidence estimated by the Committee to be 0,10 meters in 2100 (p. 25). The Committee added that current flood protection standards were outdated and that audits revealed that even these outdated standards are not met. By referring to Dutch (1953 North Sea flood) and foreign (Katrina) catastrophes, it concluded that major social disruption and economic disasters were conceivable, if not acted upon now.

Even though the report fitted the Committee's broad mandate to a large extent, it did differ on some aspects. Firstly, the committee defined the coast broader, enabling it to include the Netherlands as a whole. Secondly, even though the mandate requested for "the formulation of sustainable policy *strategies* for the coast" and to give advice on "[t]he desirability of *a range of policies*" (Deltacommissie, 2008, emphasis added), the committee chose to present a univocal strategic vision together with an outline of policies. However, these policies were to indicate directions and are not "a cut-and-dried blueprint" (p. 19). The proposed engineering solutions were presented as no-regret, allowing for adaptation later on.

A close look at the Committee's vision shows it stresses continuity and change at the same time. The leading pillars, safety and sustainability, mean to the Committee the possibility to maintain current patterns of working and living in the safest delta in the world where the government guarantees water safety, which it terms the highest priority (pp. 39-42). The Committee's vision deviates from the dominant water discourse by looking further into the future (2100-2200), presenting a budget strategy for almost a century, and putting water shortage next to flooding on the safety agenda. Also, it declared to end control over nature in coastal management by introducing the adaptive concepts of 'developing with the climate' and 'building with nature'. Some predominantly see large engineering policies combined with a reinforcement of centralized decision-making, despite the softer rhetoric of accommodation (De Boer et al., 2010; De Vries and Wolsink, 2009). However, most striking is that the Committee above of all propagated institutional reform to reinforce policy development, rather than providing concrete solutions. The report can therefore be conceived of as a meta-vision, with the sting in the final, institutional recommendations.

## 4.5 Producing usable knowledge

### *4.5.1 The Committee's practical problem*

Within the Committee several basic beliefs prevailed on how to produce a report that is not only usable, but would also be used. The report should be finished during life of the cabinet, as later administrations would have other priorities. Also, it had to contain a clear and univocal narrative, rather than to provide all kinds of options. However, it should also be sufficiently open in order to leave room for political deliberation. Its technical substance was therefore not the most important, but rather the provision of a clear perspective on how to organise the realisation of the proposed vision.

### *4.5.2 Internal processing: producing the advisory report*

#### *4.5.2.1 Organising access through membership*

In organising an advisory process, the composition of the committee and its secretariat are of vital importance. Even more so than in standing committees, an ad hoc body like the Delta Committee is granted its relations to its environment through the composite sum of the social networks of the participating actors (see also Table 1). Through its members the Committee had exchange routes across multiple boundaries, anchoring a range of social worlds to its conference table. This not only allowed for little interfaces between the sciences, politics, policy sub-fields and industry on the one hand and the committee on the other, but also provided the Committee with knowledge on the rationalities and norms of these different social worlds.

Regarding the scientific disciplines, three of the committee members were active scientists, while

several other members held extraordinary professorships, but do not primarily work in science. Kabat, Stive and Fresco can be regarded multidisciplinary in focus, but the main disciplines covered by these scientists are climate science, water engineering, sustainability and agriculture. All of them are highly reputed in the Netherlands and key figures in research programmes on climate change or other committees on water and agricultural issues. This grants them access to the state-of-the-art of knowledge on the one hand, and the authority in defending the Committee's scientific claims on the other. In a similar fashion, its other members provided the Committee connections to other relevant social worlds. Its chair, Cees Veerman, had a long experience as a politician and former minister for the Dutch Christian Democrat party, and knows his way in the Dutch political arena. Van Oord was CEO of an internationally leading company in dredging and marine engineering, connecting the water industry as well.

Not only the Committee members themselves functioned as boundary workers, so did the staff of the Committee's supporting secretariat. The high quality secretariat consisted of eight senior civil servants who had a diversity in specialties and experience in serving other advisory committees on controversial subjects. Several of these civil servants functioned as what they themselves termed 'liaisons' to their parent departments, in this case the Directorates-General on Spatial Planning, Water, Agriculture and the executive organisation Rijkswaterstaat. These liaison officers had the task to connect to current or emerging policy programmes. They also functioned as informal exchange routes between the Committee and the involved departments, allowing for the reciprocal anticipation to possible recommendations and to particular departmental positions.



#### *4.5.2.2 Organising internal deliberation*

Central to the first meetings was interpreting the given mandate. The Committee redefined the scope of its assignment, deciding to present an integral, interdisciplinary vision on a broadly conceived Dutch 'coastal system': here the delta. Important is the positioning of the final advice vis-à-vis the existing visions on Dutch water management, as well as anticipating on the salience of the Committee's report. According to Veerman, in advising politics "one should not come up with rock-hard solutions", but rather provide a univocal, not too complicated vision and leave room for further political bargaining (cited in Anonymous, 2008, our translation). Essential for its acceptance the advice is not to be owned by the Committee's members only, but also by the departmental people who would have to work with it later on.

In the initial phase of the advisory process, investments were made in identity building and the creation of a team spirit, for instance by social events such as organising Committee meetings at the chairman's farm or a plane flight over the delta to imbue members with the importance of the issue at hand. Reaching a shared belief over the goal of the committee was pivotal to create a workable division of labour across all boundaries. At one of the first meetings the members could express their views on the scope of the committee and the challenges the Netherlands faced. All members found one other in the objective to guarantee the prosperity and safety of the Netherlands against the most

extreme events in the long term and in the diagnosis that the problem in reaching that goal was not so much of technical or financial nature, but rather institutional. This narrative yielded consensus over the serviceable truth. "One, scientific soundness was beyond doubt. Two, very important was that members shared the goal of the Committee. Then there is not so much a contradiction [between science and politics] anymore." (interview, our translation).

The Committee met about once a month, sometimes for more than one day to discuss matters. The Committee secretariat worked with what they termed a knowledge agenda, basically a spreadsheet with open scientific questions, answers and routes to obtain that knowledge. This agenda was a systematic approach in indexing the state-of-the-art knowledge on climate, water management, nature, spatial planning, recreation, agriculture, etc. The secretariat then gathered the available information with the experts working on relevant projects at the departments or at knowledge institutes such as Deltares. Also, roughly a dozen research reports were commissioned to consultancy firms, knowledge institutes and an international group of prominent climate scientists. The secretariat officers then wrote memos for the members concluding on that material. Initially, several sub-committees existed on topics like climate scenarios or administrative-juridical issues. A large amount of scientific knowledge and expertise was available, making it the Committee's central task to assess the existing knowledge base and to select the most useful parts thereof. A point we turn to next.

#### *4.5.2.3 Managing boundaries internally*

In presenting a science based policy vision, the boundaries between science and policy were blurred more than in an 'ordinary' scientific assessment committee. To construct a front stage image of legitimacy and credibility of the Committee's claims, the Committee had to choose its scientific facts in a way that would be supported by the scientific community. Any image of selective shopping in science to support a pre-given political agenda was to be avoided. To paraphrase some of our interviews, knowledge had to be undisputed and the Committee had to work with leading experts, not belonging to a single school. Simultaneously, the Committee had clear objectives, as discussed in the previous section. In order to create a workable situation, the participants of the scientific assessment had to be aware of and agree on these objectives. In this delicate process the managing of boundaries is important, in casu: under what conditions can scientific claims be used and coupled to a policy recommendation? To explain this process, consider the example of the Committee's high-end sea level rise scenario (for details see appendix 3 of the report and Katsman et al., 2011), the result of a study chaired by Vellinga, involving the KNMI and IPCC affiliated climate scientists (cf. Hulme and Dessai, 2008).

Was the decision to commission a high-end scenario study a scientific or political one? The answer is both: it is a hybrid. Firstly, the Committee had scientific arguments. As an IPCC scientist, Committee member Kabat knew very well that the IPCC or KNMI figures are compromise – or hybrid – figures. Publications in the climate journals after the last IPCC07 assessment gave

reason for a scientific update of the IPCC figures. These figures had to be downscaled for the Dutch regional situation. Moreover, reasoning from hydraulic engineering science, a good image of extreme situations was useful. When building delta infrastructure it is well defendable to design it on worst-case conditions, rather than on average conditions. Secondly, the Committee also had political arguments for the high end scenario: the Committee wanted to guarantee the safety of the delta even when the darkest scenarios became reality (see Fresco and Veerman, 2008). Also, creating a sense of urgency was a motive. The Committee wanted to show that even though the Dutch are safe now and threats are not acute, it was urgent to get to work now.

The presentation of the high-end figures in the report reflects another episode of boundary work. Here, for instance, decisions had to be made on how to deal with the gravitation effect, an ongoing scientific discussion. Incorporating it in the projection would yield a range of roughly 0 to 1,3 meters sea level rise in 2100, instead of 0,65 to 1,3 meters. Based on arguments that the scientific debate was not settled (footnote 14 of the report), it was decided to disregard the gravitation effect in the main text and to amend the figures in the report with footnotes and discuss it in the appendix. Science offered different valid representations of figures, making it the central issue: "Okay, we want a clear message. How much helps the scientific correct statement 'between 0 and 1,30' or 'maximum of 1,3?'" (interview, our translation). The Committee was sensitive to merge in these figures the political rationality of presenting a clear-cut message: 1,3 meters should be considered as upper limit ánd this extreme situation could be handled. An uncertainty range of 0 to 1,3 meters was less salient for the policy debate. Another episode arose on what words to use to present these figures. Scientifically one could regard these figures as plausible upper limits, but not as a likely scenario. The report is nuanced and clear about that (p. 27). Those nuances are simplified in the summary and the press release of the report, where the word 'plausible' disappears. A debate on the high-end scenario flared up in the media later on, and even members of the commissioned high-end report were critical, blaming Veerman to overstep the negotiated boundaries (Van Rijswoud, 2012). However, the dispute focussed on the interpretation of the figures, rather than on the figures themselves. What the high-end scenario example makes clear, is that in the delicate practices of tailoring the assignment and presenting the figures, the Committee merged the rationalities and norms of both the scientific and political social worlds in a framing acceptable to all.

In some cases working on a boundary object can focus on the level of a word. Consider the example of the Delta Dikes, one of the report's recommendations (p. 48). For various reasons the Committee members agreed upon the objective to decrease the probabilities of uncontrolled flooding when a dike bursts. The concept of "breach-free dikes" was considered a promising concept. These dikes are so wide or so strong that they are virtually unbreachable, resistant to overtopping and provide all kinds of opportunities to combine them with infrastructure or property development on top of these dikes. This triggered all kinds of substantial discussions in the Committee on related concepts like multi-layer safety. However, from a scientific perspective the 'unbreachable' framing is unacceptable. Stive, professor in coastal engineering, resisted. Scientifically, a breach-free dike does not exist, as there always will be a residual risk of collapse. Still, all members agreed that a dike that almost cannot break was in essence a good idea. What followed was a debate on the wording of the

concept, which was eventually settled by the chair proposing 'Delta Dikes', an emblematic word in Dutch water policies. In this way the boundary object was acceptable for all, fitting the policy needs of a clear and promising concept and fitting the scientific rationality warranting credibility.

#### *4.5.2.4 Organising closure*

The Delta Dikes case can be considered exemplary for the way decisions were made in the committee. The gathered reservoir of relevant knowledge, ideas and considerations had to be digested and written down to form the comprehensive vision of the Committee. The routine procedure of reaching discursive closure on topics was to incrementally build up the report by pieces of text written by the secretariat. Most of these pieces were drafted by one of the secretariat's civil servants who was a non-expert in water management, contributing to their readability. These pieces were then input for the Committee's deliberations. This contributed to the gradual building up of fragments from which slowly but surely a clear line began to emerge in their meetings. In this process members commented and amended the texts until consensus was reached. The general impression from the interviews is that, despite the intensiveness of the discussions, this evolved in good harmony. The aforementioned investments in creating a shared belief and ownership of the issue at hand and a team spirit contributed to this process. Also, water safety is a very uniting rather than controversial subject in the Netherlands.

Enlightening for the understanding of the routines of Committee decision making is to look at the exception that proves the rule. In some cases consensus was not reached easily and an agreement had to be laboriously negotiated. One example of such a precarious issue was whether the Committee would recommend the appointment of a governmental officer and how much power this officer would be attributed. A dispute rose whether the officer should be a government commissioner, a position supported by the chairman. Another member, mainly entrusted with the administrative section of the report (Warbroek, 2008), opposed and favoured an officer with mere coordinating tasks. After bargaining in a smaller group, the final version of the report recommends a Delta Director, with footnote 62 referring to the constitutional term of the government commissioner. In this situation the importance of consensus and the power of individual members have come to the fore. Decisions "are never literally reached by voting [...] but always by consensus" (interview, our translation). If a disagreeing member would have used the legal right to publish a minority position, that would have created valve in the authority of the report. "The [chair] was fully aware of that, we didn't have to tell that to anyone" (interview, our translation).

### *4.5.3 External positioning: building on epistemic and political robustness*

#### *4.5.3.1 Practices of interaction and exchange*

Simultaneous with the internal production of the advice, several practices can be observed by

which the Committee engaged in an ongoing interaction with several social worlds. Under the motto of "towing the net as wide as possible through the sea" (Veerman cited in Anonymous, 2008, our translation), both formal as well as informal exchange routes were set up, partly by one of the secretariat's officials dedicated with 'acquaintances management'. The Committee upholds a front stage linear image in the report (p. 18, but also in various media utterances), claiming that its members were successively informed with issues and ideas by regional administrators, community groups and experts in a series of workshops, meetings and field trips, that they subsequently made their own independent analysis and then tested their recommendations with the scientific community. The back stage practices, however, nuance this linearity into an image of a two-way road. In fact, the committee continuously, yet informally, interacted with politics, from parties to Provincial Councils, policy, both with programme teams and high-ranking officials, expertise, the knowledge institutes, and the water industry. In these contacts preliminary Committee ideas were exchanged and commented upon. This was not only confirmed in interviews, but is also reflected in the gradual trickling down of recommendations in the press or the quick orchestrated cabinet response only 9 days after the presentation of the report.



The effects of the two-way interaction were twofold. Firstly, through these practices of interaction the Committee became sensitive to popular ideas which it had to relate to and to no-go areas in the involved social worlds. In some cases, proposed ideas could readily be used. In other cases the Committee engaged in a balancing act in order to distance itself from popular plans. For example, late 2007 the concept of constructing artificial tulip-shaped islands in front of the Dutch coast was a hot idea, supported by Veerman himself, his Christian-Democrat party, the Dutch industry and the Innovation Platform chaired by the Prime Minister. The Dutch parliament even accepted a motion in order to investigate the feasibility of these islands. Coastal engineer Stive had his doubts. Not only did the Committee had to settle internally whether islands would fit the end of providing safety against sea level rise. Also, the coalition surrounding the concept was so large that it forced the Committee to invest a substantial effort to credibly and acceptably *not* advice these islands, but beach nourishments instead. Appendix 5 of the report is dedicated to explain scientifically why the Committee does so, aligning its position en passant with Deltares and prominent coastal engineering professors.

Secondly, through these practices of interaction, the Committee built on the societal and political robustness of its recommendations. By incorporating dominant ideas and concepts of social worlds or rejecting them with strong lines of argumentation, the report became recognizable for a broad range of actors. This constant dialogue gradually produced a form of co-ownership of the Committee's conclusions by those that had to work with these conclusions later on. The aforementioned balancing acts appear across all boundaries and was an ongoing practice. Ideas crystallizing out were presented to administrators, politicians and societal organizations in order to probe their acceptability and usefulness, if included in the report, and to work on the receptivity of Committee ideas. Combined with the front stage image of an advisory process in which all could contribute ideas, this shielded the Committee from attacks that it intentionally or unintentionally neglected issues, which in turn would erode the perceived legitimacy of the report.

#### *4.5.3.2 Enrolling reputed science*

Expert authority is not solely a matter of internal boundary work in committee meetings, but also a process of recruiting sources of credibility. Claiming a firm scientific basis and the support of IPCC and flood management experts (p. 10, but on many pages) by pointing to committee membership or a dozen commissioned reports alone, is not sufficient for epistemic robustness. Rather, to become resilient to other scientific claims in the aftermath of the report's publication, it is important to *maintain* the support of credibility sponsors. If the supporting scientific institutes like KNMI or Deltares would publicly express their doubts on the validity of the Committee's claims or when mistakes were revealed, the advice could become controversial, losing its performativity as a boundary object.

Firstly, and similar to practices described across other social worlds before, the report was scrutinized by a range of critical experts before its presentation. This process akin to peer review was supposed to reveal mistakes and blind spots. Secondly, the Committee engaged in practices of aligning science and expert institutes with its conclusions. For example, the Committee engaged in discussions with KNMI on how to position the Committee's climate scenario vis-à-vis the four KNMI '06 scenarios, which was important for the KNMI. "We could obviously not afford it if the KNMI would say 'we think it is rubbish'. The KNMI could obviously not say that, because they participated" (interview, our translation). Closure was found on presenting it as a plausible high-end scenario. Through these practices, the Committee's advice was tailored to meet scientific norms and to uphold the front stage image that it was not just the Committee advising, but indeed a whole network of renown experts.

## 4.6 Conclusion and discussion

September 2008 the Delta Committee advised the Dutch government based on a worst-case climate scenario. The Committee was effective in the sense that an important part of its advice was adopted. In advising a serviceable truth, we observe a series of simultaneous and interrelated practices. Our findings suggest that working on boundary objects is a delicate merging process taking place within the Committee, but is also a process of simultaneously positioning and negotiating with multiple social worlds. The negotiation of scenarios should be understood in the in the direct context of its construction and anticipated utilisation (Hulme and Dessai, 2008). Central to the merging process is the tailoring and wording of claims in such a way that they become responsive to the rationalities and criteria of all involved social worlds. This means that claims should simultaneously meet the validity and reliability criteria of the sciences, are sufficiently clear to the political actors, connect a range of policy programs and are acceptable for various stakeholders.

Our findings are relevant for the theory on boundary organisations. The literature on their functioning focuses to a large extent on the internal organisation of these bodies and how to institutionally redesign them to increase credibility, salience and legitimacy (Cash et al., 2003;

Guston, 2005; Lentsch and Weingart, 2011). We observed mechanisms for enabling internal deliberation, boundary management, mediation and ultimately the translation of the report in a visual and understandable format also found by Cash et al. (2003) and White et al. (2008). Indeed, our findings confirm that recruiting Committee members from all sides of the boundary is important (Guston, 2001) and that members must be sensitive to the needs of both science and policy (Jasanoff, 1990). Yet, following Miller (2001) we saw that overhomogenising science or politics is not a productive assumption. For instance for science, we showed that e.g. climate and engineering science are not self-evidently connected and may have different norms and rationalities. In the same line, the committee serves multiple audiences of politicians, civil servants and industry, etc.

The focus on the internal practices and organisation explains, however, only part of a boundary organisation's effectiveness. In this case the Committee's effectiveness in producing its report was also to be found in what we term the external back stage positioning of the advice (cf. Bijker et al., 2009). Upholding an image of salience, credibility and legitimacy is by no means self-evident. It requires the Committee to actively interact with many actors from all social worlds during the advisory process. In a constant exchange process the Committee gradually recruited support for its ideas, became sensitive to scientific and political no-go areas, and collected dominant ideas it had to relate to. Positioning means on the one hand attuning the advisory report to the problems framings of policy makers, the dominant narratives in Dutch water management and earlier advices produced by a strong and water-centric science-policy interface. On the other hand positioning means negotiating the substance and presentation of the report with actors and their positions in the field, in order to enrol them to back the Committee's vision and to credibly speak for a network of important actors. Gradually building, testing and positioning the advice was pivotal in maintaining support after its publication. The historically grown constellation in which the Committee operated thus empowered the writing of this report, but also constrained the Committee what it could advice.

Gieryn (1995) emphasised boundary work as a rhetorical game and is sometimes criticized for being too voluntaristic. Here we showed the importance and delicacy of wording claims by a boundary organisation to become responsive to the rationalities of involved social worlds. We also showed the importance of the grown context for the committee. Future research taking a discourse analytical perspective on boundary organisations is interesting, especially if it can connect the microprocesses of boundary management with the structurating elements of discursive constellations reflecting institutionalised relations between science and politics. In this paper we showed the value of opening up the black box of boundary organisations in order to not only focus on discursive output, but to follow the process of tailoring claims as well.

Our findings confirm the importance of iterative practices of boundary organisations in gradually building on robustness (Lemos and Morehouse, 2005; White et al., 2010). The ongoing consultation with stakeholders works in two ways. It enables the Committee to become sensitive for ideas and critiques, and gradually build on its support. As most of the literature on boundary organisations focuses on standing bodies (Bijker et al., 2009; Clark et al., 2011; Kirchhoff et al., in press; Lentsch

and Weingart, 2011) and stable exchanges between science and policy, our findings may be particular for short-term, ad hoc boundary organisations. Due to the short life-span of this Committee, the iterative practices may be more volatile than the institutionalised patterns of standing boundary organisations, such as exchange fora or standardised procedures. Possibly, the importance of building an infrastructure with members to organise exchange and to position the Committee vis-à-vis authoritative actors is more important for ad hoc committees than for standing bodies that have build up authority over the years. On the other hand, the task of these organisations, providing serviceable truths, remains the same. It would be interesting to further explore whether these two types differ, and what lessons can be drawn with relation to their effectiveness.

Finally, the literature on boundary organisations stresses the importance of clear lines of accountability to either side of the boundary. For instance, Guston (2005) suggests open voting rules for members to express agreement, in order to increase information and transparency for decision-makers. Bijker et al. (2009) disagree with too much transparency as it interferes with a protected deliberation space and the exploration of different meanings. Our findings suggest a minority position would seriously hamper the effectiveness of the report, and consensus was preferred above voting at all times. Perhaps these differences are related to the consensual style of the Netherlands in contrast to the adversial style of the US. An interesting line of research would be to study how lines of accountability of boundary organisations work out in different political cultures.

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# Chapter 5

## Unravelling deliberative governance; understanding the interplay between processes of puzzling and powering through frame interactions[6]


### Abstract

Deliberative governance has been proposed to do deal with the wide variety of frames in wicked problems. Little is known however, about how actual frame interactions in deliberative governance lead to policy outcomes. We analyse frame interactions in deliberative governance of adaptation to climate change, and show how they shape policy outcomes through interplaying processes of puzzling over meaning and powering over positions. We find that a dominance of nationally-scaled technical framing empowered national administrators but led to a political bystander-effect among regional political decision-makers. We discuss how the semi-open ad hoc character of deliberative governance may have led to this pattern.


6 Under review as: Vink, M., Dewulf, A., Termeer, C., Unravelling deliberative governance; understanding the interplay between processes of puzzling and powering through frame interactions. *Administration and Society*

## 5.1 Introduction

Deliberative forms of governance have received increasing attention by scholars that study how societies deal with wicked or ill-structured policy problems. Deliberation in networks of governmental officials and societal players who collectively make sense of societal problems is believed to improve decision making in complex and wicked problems with multi-level government involvement (Goldsmith and Eggers 2004, Klijn et al. 2010, Sørensen and Torfing 2011, Termeer et al. 2013, Dryzek 2010). For governing the wicked problem of adaptation to climate change deliberative modes of governance have been proposed as well. The bottom-up decentralized character of deliberative governance for adaptation to climate change is believed to mobilize relevant knowledge and to accommodate for different problem definitions or frames in plural societies (Vink et al. 2013b).

There is an on-going debate however, on the actual effects of deliberative governance on public policy issues and whether it lives up to its promises for society. On a general level Bannink and Ossewaarde (2012) for example discuss how decentralised forms of governance that come with withdrawing state regulation result in paradoxes of responsibility: Decentralised players tend to address local issues instead of acting towards national concerns. In addition, while the focus on deliberations in deliberative governance aims to value the variety of problem frames regarding a particular policy issue, Van Eeten (2001) indicates that deliberative governance can also lead to such a wide array of frames that public officials find it difficult to translate this into policies, resulting in a selective choice for a restricted number of (vested) interests being heard. Stoker (1998) and Rhodes (1996) highlight a possible lack of transparency about state involvement in what they define as decentred governance deliberations between individual state and non-state players, and Jessop (1998) highlights the privileged position this creates for the state in governance processes. Others question the neoliberal market mechanisms they assume in deliberative governance approaches (Moravcsik 2002, Ranson 2003, Swyngedouw 2005, Catlaw and Sandberg 2012). The problem with most of the claims however, is as Sorenson and Torfing (2011) point out that only few studies have attempted to empirically unravel the actual processes of policy formulation and policy implementation through deliberative modes of governance. As a result little has been theorised on how participants in deliberative forms of governance actually participate their way into outcomes that are clear enough for concrete policy action (van Eeten 2001).

The weakly institutionalised policy field of climate adaptation, with its long time horizon, intrinsic uncertainties, and ambiguous societal understandings or framings of the issue, is a highly interesting site for studying deliberative governance (Hulme 2009, Dewulf 2013, Vink et al. 2013a). Therefore this paper explores the micro-level deliberative processes of governing climate adaptation in a little institutionalised network context. In the next section of this paper we build a theoretical framework on how players in deliberative governance simultaneously puzzle over meaning and power over positions through textual frame interactions (Heclo 1974, Dewulf et al. 2009, Vink et al. 2013a). In the results section we apply our theoretical framework to deliberative governance of climate adaptation in the case of the Dutch Delta Programme for the *IJsselmeer* (Lake IJssel) region. By

conducting a longitudinal frame analysis of frame interactions in 10 substantial network meetings of public and private players during a period of three years, we show that a technical framing of the climate adaptation issue dominated in the frame interactions. We show how this technical frame dominance influenced both the *substantial* and *relational* outcomes of the governance process. We discuss how this technical framing empowered the role of administrators and experts, but yielded apathy among politically elected decision-makers and might illustrate the emergence of what we define as a *political bystander effect* in deliberative governance.

## 5.2 Theoretical framework

Although the concept of governance attracted considerable attention over the last decades, not in all fields the concept is being used in the same way. According to Rhodes (1996) the concept is 'imprecise', but may in general be viewed as referring to inter-organisational self-organising networks, related to a withdrawing state government. Governing thus becomes decentred in the sense that the organisational centre's capacity to regulate the process of governing remains underdeveloped (Rhodes 1996). In that sense, Rhodes continues, policy outcomes are less dependent on a sovereign regulating authority responsible for decision making, but more on a market-like co-production of more or less equal players in a network, who share knowledge and perceptions trough language. This *decentred* approach to policy making seems to correlate with definitions of governance often prescriptively adopted in climate adaptation studies, advocating learning-based policy formulation, often at the expense of attention for the role of political negotiations or power differences (Vink et al. 2013b).

Although the government often plays an important role in guiding deliberative governance initiatives by acting as a network manager, or as a 'gatekeeper' determining who is included and who is excluded in the network, this regulation is ad hoc, not formalised and takes place parallel to formal decision-making and related institutionalised systems of interest intermediation between societal representation and the state (Schmitter 1974). In that sense inherently weakly regulated governance deliberations may become powerful, resulting in policy outcomes that are difficult to predict, steer or account for. Climate adaptation governance, then, may not only be about deliberating ideas and knowledge though stakeholder networks, it may also be about access to knowledge and access to deliberations, power to serve (public) interests, or influence on formal political decision-making. Following Stoker (1998) this means that although the state generally remains a strong albeit informal player in governance networks, accountability and legitimacy of state power are more complex issues in governance networks compared to the traditional state led policy formation and execution.

### *5.2.1 Deliberative governance as a decentred process of puzzling and powering*

In deliberative governance, ambiguous knowledge, ambiguous membership of stakeholders and

a less visible but relatively large role of the state often results in a blurred process (Stoker 1998). For understanding this blurredness neither a purely technocratic view of policymaking, where the 'best' policy option can be derived out of proper calculation and modelling, nor a purely political perspective on policymaking where societal representatives negotiate over interests based on rational micro-economic thinking, are sufficient (Schön and Rein 1994). An interesting way of understanding policy deliberations in this context might be what Heclo and others have defined for more traditional institution-centred policymaking as a process of both *puzzling* over ideas, and simultaneously *powering* to get things done. Puzzling and powering are not separate things; by puzzling over plausible storylines coalitions may be built and power configurations may be formed or changed (Heclo 1974, Hall 1993, Visser and Hemerijck 1997, Culpepper 2002, Hoppe 2011). In the weakly institutionalised setting of deliberative governance with unclear procedures, routines and authority, interplaying processes of puzzling and powering may be all the more important for understanding outcomes.

### *5.2.2 Interactive framing*

Where Heclo theorizes policymaking processes on a rather general level as the interplay of both puzzling and powering, scholars like Schön and Rein and others (Stone 1989, Schön and Rein 1994, Yanow 1996, Dewulf et al. 2009, Wagenaar 2011) add the concept of *framing* to understand policy making process over ambiguous issues. They understand policy making on a more linguistic level as a process of collective sensemaking by language-in-interaction. Frames are metaphors or short storylines that select, organise and interpret parts of a complex reality to provide guideposts for knowing, analysing, persuading and acting (Schön and Rein 1994). These frames explicitly or implicitly say something about the cause of the problematic reality, and at the same time take a moral standpoint towards this reality implicitly pointing towards possible solutions. In policymaking processes, on occasions like parliamentary debates or administrative meetings, players interact through frames. This interactive alignment of meaning can result in agreements or disagreements, conflicts or coalitions, and apathy or action (Weick et al. 2010, Dewulf and Bouwen 2012).

### *5.2.3 Puzzling and powering through frame interactions*

In the classical concept of collective puzzling over what is at stake and what to do, sensemaking through frame interactions obviously plays an important role and might be viewed as a form of social learning (Bouwen 2004). However, in policy processes the resulting meanings are not without consequences. Frame interactions between players that create shared or opposing meanings influences relational positions. Frame interactions therefore can be considered meaning making devices (Schön and Rein 1994, Dewulf et al. 2009, Weick et al. 2010), which consciously or unconsciously are used as tools for including, excluding, emphasising or downplaying issues, processes, relations or identities in a process of working towards shared meaning (Entman 1993, Benford and Snow 2000, van den Brink

2009, Dewulf and Bouwen 2012). Players might strategically choose both their *partners* with whom they wish to puzzle, and the *frame* they employ in interacting with these partners. Apart from mere social learning, the use of frames in specific social interactions also resemble a process of power play (Giddens 1984 Arts and Tatenhove 2004, Torfing 2009). Puzzling and powering therefore are interplaying processes, which might be captured through analysing frame interactions.

### *5.2.4 Substantial outcomes and relational outcomes*

In social processes frame interactions may continue endlessly. In context of policy deliberations however, at some moment in time frame interactions are likely to crystallize in policy documents. These documents resemble materialised meanings, or policy frames, which will function as guideposts for policy action and implementation. In addition to these *substantial* outcomes of policy deliberations, frame interactions also lead to *relational* outcomes like coalitions, conflicts or social divides, which are likely to be related with the substantial outcomes: If frame interactions yield a majority coalition in favour of a specific policy frame, this frame is likely to materialize in a policy document, which will reconfirm the winning coalition in relation to the players not part of the coalition. Frame interactions therefore affect both the substantial outcomes of the governance process as well as the relation outcomes; outcomes which are interrelated.



## 5.3 Research question and design

Although deliberative forms of governance are proposed to do justice to the wide array of frames characterising the long term wicked character of climate adaptation, little is known about how these frames actually play out in these little institutionalised deliberative processes. Traditionally policymaking over long term wicked policy problems has been studied as rather institutionalised, though interplaying processes of puzzling over meaning and powering over positions (Heclo 1974). Less has been written about the actual *interplay* of puzzling and powering, and especially little empirical studies have been conducted on how this interplay works out in present-day deliberative governance initiatives, where deliberations take place in semi-open networks with government involvement (Dryzek 2010). This brings us to the following research questions: How do the interplaying processes of puzzling and powering through frame interactions shape substantial and relational outcomes in deliberative governance?

For answering our research question we take into account Sorenson's and Torfing's (2011) concern about the limited in-depth case study research which has been conducted in deliberative governance, for which we apply a qualitative constructivist approach in doing single case study research. By doing so we are able to gain in-depth understanding how frame interactions in deliberative governance play out in terms of interplaying processes of puzzling and powering and lead to substantial and relational outcomes. Although we are aware of the limitations of case study research in drawing general conclusions on cause-effects in policy research, we turn to Flyvbjerg (2006), Gerring (2004)

and Thomas (2011) in their assessment of case study research as a method for gaining understanding of the non-linear in-depth relations between a wide variety of variables in context. Hence, we apply case study research to nuance general theory on deliberative governance in the emerging field of climate adaptation. To do so we selected the Dutch Deltaprogramme for the IJsselmeer (Lake IJssel) region (DPIJ) as our case study. This climate adaptation policy programme shows an interesting example of a substantial ad hoc organised deliberative governance process. Deliberations take place in a government initiated network setting with a wide variety of public and private players parallel to traditional Dutch institutionalised patterns of interest intermediation between a limited number of societal interest groups and the state, often referred to as neo-corporatism or '*polderen*' (Prak, M., & Luiten van Zanden, J. 2013; Schmitter 1974). This climate adaptation governance process illustrates a policy challenge of dealing with uncertainty, as well as with a large variety of frames interacting across multiple institutional scales and policy domains, all in the context of a plural society characterized by ambiguous understandings of the climate issue. We believe the DPIJ case closely resembles a deliberative governance initiative (Dryzek 2010) to overcome the long term wicked character of climate adaptation as often prescribed in climate adaption literature (Vink et al 2013), and therefore the case enables us to unravel the puzzling and powering interplay deliberative governance of climate adaptation and its outcomes through analysing frame interactions.

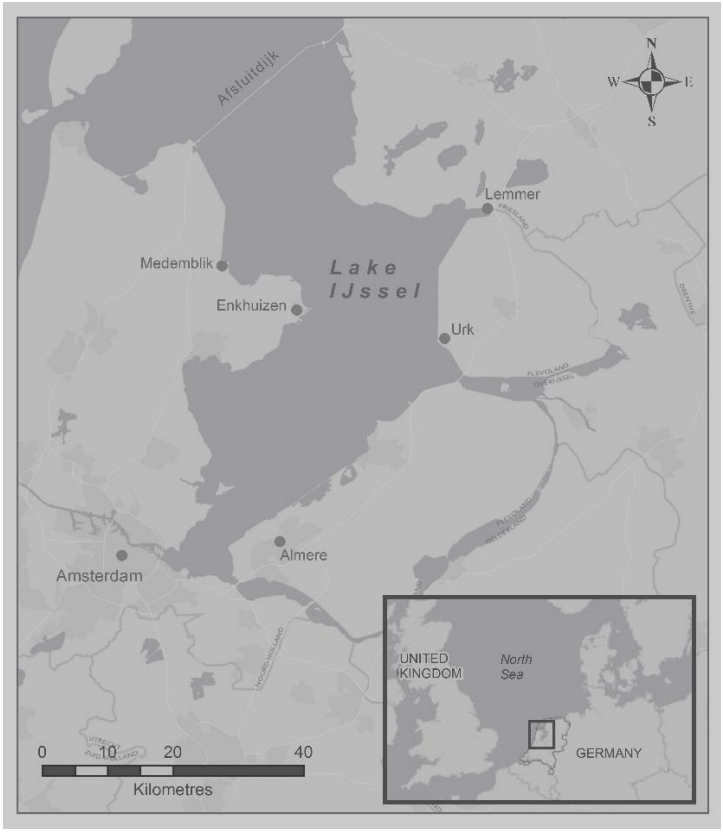
## 5.4 Case description and research methods

### *5.4.1 The Dutch Delta Programme for the Ijsselmeer region*

Climate change and associated increase in droughts and sea level rise potentially has large impacts on low laying densely populated Delta region. Such vulnerable delta regions make up substantial area's of the Netherlands (Kabat et al 2009), and despite the long tradition of flood protection and water management of the Dutch, in 2008 a political advisory committee (the Second Delta Committee) put the need for reconsidering the nation's water management in view of climate change firmly on the national political agenda. In response, the Dutch national government initiated the national Delta Programme in 2010 which was anchored in a new Delta Law, a Delta Fund and a new high level administrator called the Delta Commissioner. All institutional changes were recommended by the Delta Committee and were accorded by government and parliament in 2012 (Delta Commissie 2008, Boezeman et al. 2013, Vink et al. 2013a). After the alarming framing of the Second Delta Committee the general task of the Delta Programme was framed in more operational terms: *"The Delta Programme [...] is aimed at guaranteeing that the Netherlands remains safe and attractive, now and in the future, and that the freshwater supply is adequate"* (Delta Programma 2013). The Delta Programme consists of 9 sub-programmes of which most are defined on a regional basis, and some on a thematic basis. The studied sub-programme for the IJsselmeer region (see figure 5.1) deals with two questions: "*How can we ensure that in the future surplus water can continue to be discharged into the Wadden Sea from the large rivers and IJsselmeer? And how can we maintain the largest supply of freshwater in the Netherlands?*" (Delta Programma Ijsselmeergebied 2013a).

With an expected rise in sea level and assumed increase in fresh water demand the discharge and storage capacity of this largest lake of North Western Europe -and hence the lakes' mean water level- are considered central in answering both questions. In 2008 the Delta Committee proposed a rise in the lake's water level of up to 1,5 meter to address both questions. Without additional large scale infrastructural works the 1,5 meter would potentially flood adjacent towns, nature reserves and industrial areas (Delta Programma Ijsselmeergebied 2011a). Based on this proposal in 2009 some regional political decision-makers from the IJsselmeer region formed an informal 'IJsselmeer group' to discuss the proposal and to lobby for their interests. In 2010 this initiative was incorporated in the governmental initiated Delta Programme for the IJsselmeer region (DPIJ). In the DPIJ programme societal stakeholders, experts, civil servants and political decision-makers from national, regional and local administrative levels (including the former IJsselmeer group) were invited to join a semi-open *ad hoc* network governance process in which knowledge and ideas were to be deliberated for working towards: *"...a broad-based advice in 2014 from the cooperation partners* [DPIJ] *to the Delta Commissioner"* (Delta Programma Ijsselmeergebied 2013a). On the basis of this advice and the advice of the other eight sub-programmes, the Delta Commissioner proposes Delta Decisions to be decided upon by the national government in 2015.

**Figure 5.1. The IJsselmeer region in the Netherlands.**



The programme was hosted by a special DPIJ-administrative office which consisted of about 20 administrators delegated mostly from national governmental organisations, and occasionally a regional government. A high level administrator originally from national government acted as director of the administrative office. The director was employed by the national government but was accountable to a steering committee of four representatives of the relevant political decision-makers from local and regional governmental organisations. This steering committee officially set the agenda for the programme. Although the invited stakeholders formed a plural group, the network meetings were organised by the administrative office in roughly two interaction contexts: 1) an administrative-societal interaction context and 2) an administrative-political interaction context, which are presented in figure 5.2.

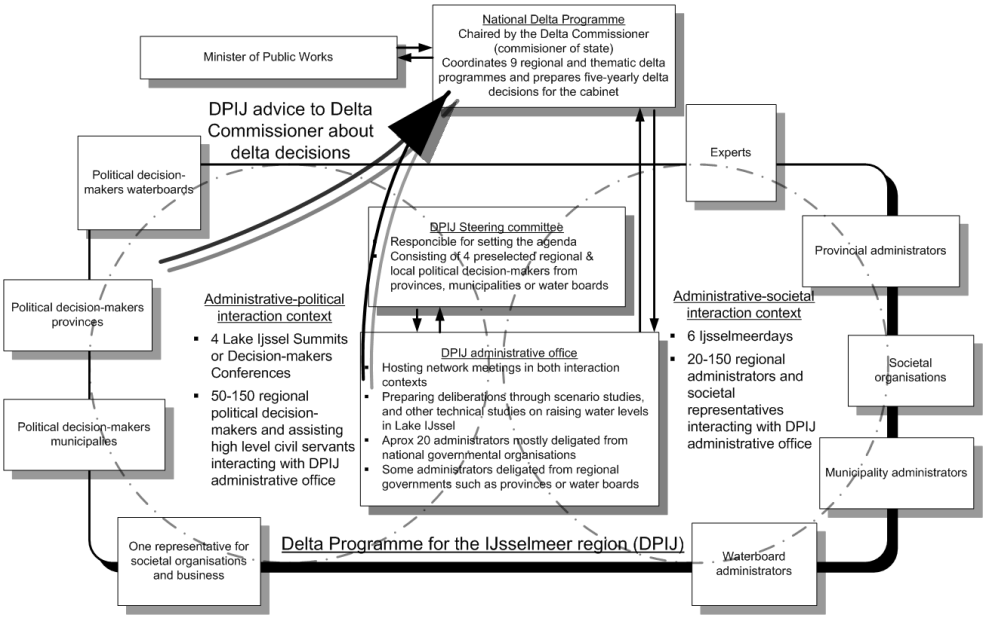



**Figure 5.2. DPIJ organisation and interaction contexts**

The administrative-societal interaction context was organised for administrators, experts and societal organisations. Large selections of players interacting in this context were invited a couple of times a year by the administrative office for so called IJssel*Meer*dagen (IJssel*More*days / IJssel*Lake*days; in Dutch *more* and *lake* are both translate as 'meer'). During these meetings between 20 and 150 participants, mostly administrators and societal representatives from various (governmental) organisations and levels, exchanged information and discussed possibilities in terms of programme content. All participants were invited by the administrative office and were hosted in randomly chosen towns across the Ijsselmeer region.

The administrative-political interaction context was organised for regional political decision-makers

to interact with the DPIJ administrative office. For these so called *Decision-makers Conferences*, or *IJsselmeer Summits* the administrative office invited all political decision-makers or their high-level assistants from local and regional governmental organisations adjacent to the IJsselmeer. The network also included a specifically assigned representative from societal organisations. The network consisted of about 150 players, who officially met about once every year during the *conferences* or *summits* organised by the administrative office. Mostly these meetings were organised to 1) report on the programme developments 2) to let the political decision-makers network decide or agree on proposed programme approaches or plans. All participants were invited by the administrative office and were hosted in randomly chosen towns across the Ijsselmeer region.

The Delta Programme for the IJsselmeer region covered the period of 2010 to 2014 in which the administrative office defined four phases: phase 1) joint fact-finding; phase 2) defining possible strategies; phase 3) selecting promising strategies; phase 4) selecting a preferential strategy. The data collection covered the later 3 strategy development phases as presented in figure 5.3.

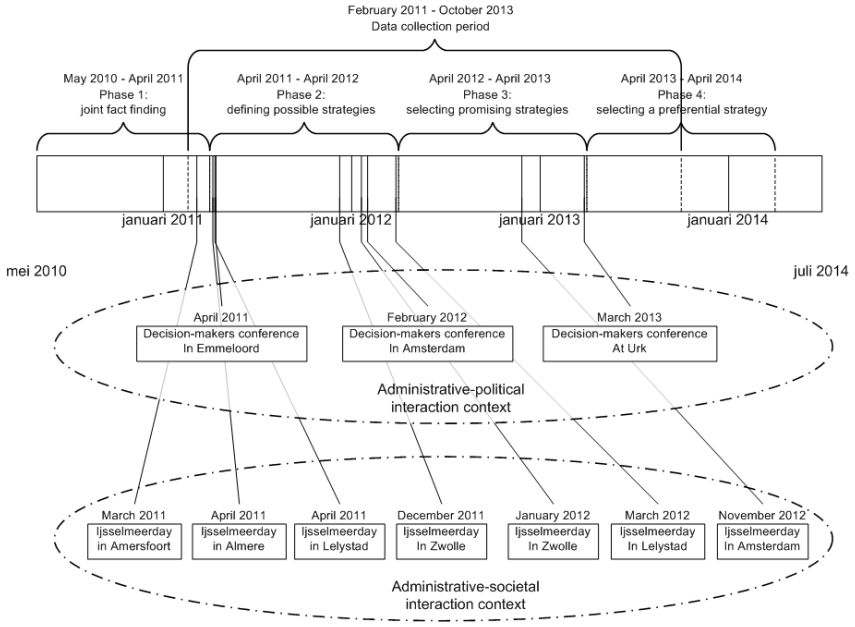



**Figure 5.3. The sequence of phases and studied meetings in both interaction contexts of DPIJ**

### *5.4.2 Data collection methods*

For collecting frames and frame interactions in the DPIJ deliberative governance process we used two data collection methods: 1) participatory observation, 2) the collection of textual outcomes of the governance process in form of programme documents and reports.

#### *5.4.2.1 Participatory observation at interaction contexts.*

For collecting frame interactions in both interaction contexts, we regularly participated in the aforementioned interaction contexts. The participatory observation consisted of observing, listening and taking notes of language-in-use during the discussions and presentations. We participated in a total of 7 meetings of various size and importance in the administrative-societal interaction context, and in 3 political decision-maker conferences. If the administrative office agreed the discussions were recorded with a digital voice recorder. Due to political sensitivity the administrative office generally did not support the idea of recording these meetings.

#### *5.4.2.2 Policy documents*

To understand how the frame interactions observed during the network meetings crystallised in intermediary outcomes, we collected the policy documents produced by the administrative office after the meetings or in preparation of new meetings. We collected all documents that came out of the network meetings we attended or were used as input for discussions in network meetings.

### *5.4.3 Data analysis*

For understanding the frame interactions as the puzzling and powering interplay in the network governance of DPIJ we analyse textual frames using a constructivist social linguistic approach (Wood and Kroger 2000, Phillips and Hardy 2002). In this approach we focussed on textual frames in form of 1) language-in-interaction between players in both networks and 2) the textual outcomes as laid down in policy documents or statements produced by these players. In this approach we analyse textual interactions for meaning making devices consciously or unconsciously employed by the players (Schön and Rein 1994, Dewulf et al. 2009, Weick et al. 2010) and their use as strategic tools for including, excluding, emphasising or downplaying issues, processes, relations or identities in a political process negotiating shared meaning (Entman 1993, Benford and Snow 2000, van den Brink 2009).

In line with our constructivist social linguistic approach, we relied on the analysis of frames as textual discourse or language-in-interaction (Wood and Kroger, 2000). Accordingly texts are studied as parts of the concrete interaction context where they occur. Wood and Kroger (2000: 91-95), offer a series of general guidelines for doing textual analytic research, a number of which are worth mentioning here: (1) try to identify the meaning to and for the participants, (2) do not ignore the obvious but try to explain it, (3) concentrate on what the speaker is doing through the talk, (4) explore the consequences of slightly different versions of the text through thought experiments, (5) look carefully at how the text is structured, (6) be alert for multiple functions of discourse, (6) adopt a comparative stance, (7) question the taken-for-granted, and (8) pay attention to grammar (e.g. passive versus active formulations).

## 5.5 Results

### *5.5.1 Frame interactions and outcomes in identifying possible strategies*

#### *5.5.1.1 frame interactions in the administrative / society interaction context*

About 150 participants joined the *ijsselmeerday* held in Almere at the end of the first phase to discuss how to arrive at a *"promising, broadly supported strategy",* as the deputy director framed the task for this meeting in line with the goal to work towards the upcoming DPIJ phases. "*The climate is changing"*, and therefore "*doing nothing is not an option*" he continued. This framing of the issue at stake was subsequently operationalised by an administrator from the DPIJ office who sketched a matrix with four scenario-like "*corner points, which represent the extreme combinations of the freshwater and flood safety tasks* [in Dutch: 'water-opgave']". His framing emphasised the technical character of these corner points: *"...which should not be seen as normative scenarios, or visions*". He continued: "*We should use them as ingredients in defining a plausible strategy to work towards the water task*". One reaction, from a societal representative, questioned whether "*these 'corner points' imply additional safety norms?*" to which the presenter replied "*that is not yet decided upon*". In doing so the presenter distanced himself from the political concept of safety norms and excluded this aspect from the current discussion by implying this will be decided later and elsewhere. In another comment a societal representative questions the framing of the strategy: "*in your explanation of the corner points you claimed that ecology is an autonomous process, is that actually the case?*", suggesting that ecology should be part of the strategic goals of the programme. The presenter replied that "*in the 'corner points' we tried to change as little as possible in terms of the current system, by searching for the technical interventions that are needed in view of the utility functions of the lake, so the effects on ecology will become more clear during the implementation"*. And finally: *"What strikes me is that the calculated fresh water demand is so big in relation to the current fresh water use; how did you determine this future demand?*" after which the presenter refers to the Delta Committee as a *"Committee of State"* putting this large water demand figure on the agenda. In doing so, the fresh water demand and the associated 1.5 rise in water level are not framed as suitable discussion topics for this meeting, referring to a higher authority that set the targets for these issues.

The explicit reference made to normative or political issues like safety norms is sidestepped by reframing political issues into technical utility issues or intervention strategies, or by referring to external decision-making entities. In addition to this subtle depoliticization the concept of "*flexibility*" and *"spatial planning"* are introduced during the plenary session and labelled as a "*core concept"* for the process. This shows how the administrators of the administrative office sidestep, or incorporate the variety of sometimes rather political framings over goals and priorities into a technical efficiency framing without abandoning the "water task" framing (Dewulf and Bouwen 2012). Both the "*corner points"* as well as the "*flexibility"* or *"spatial planning"* provide discursive room for manoeuvre and yielded a rather smooth discussion over the operational goals set by framings as "*doing nothing isn't an option*", and "*working on a water task*". The concept "task" implies a set and given nature of where to go. The combination of a flexible approach with a pre-set goal is

illustrated by the final presentation of one of the administrators: In summarising the DPIJ process she shows a picture of a meandering river as a metaphor: "*in this process we may meander, but still head for one direction*".

The importance of ambiguity in depoliticizing both the societal and scale aspects of the "water task" becomes even more clear when the consultant company hosing a succeeding Ijsselmeerday in Lelystad discussed the possibility of developing a decision-support framework in which costs and benefits should play a role. Some administrators start with defining what a benefit could be: "*What is a cost and what is a benefit? Safety is a benefit*". Somebody responds in terms of the complexity of the question: *"the question is how big the area is you focus on, and how big the problem? The smaller the problem you focus on, the easier the cost benefit calculation becomes"*. One of the leading administrators of the administrative office responded promptly*: "I don't think so. Costs and benefits should be calculated at a national scale, and then the question is what do you take in to account in your analysis, and that is too complex since all sub-programmes are still working on their plans [...] it should be taken care of on the national knowledge agenda"*. Response: *"Well you could brush over some themes, like tourism, agriculture, urban development, we could organise some expert sessions on that"*. Response: *"Ok, but then we start puzzling on something that should not be called a decision-support framework"*. Response: "*Maybe cost benefits is a wrong term, it is on the long term so we need a vision and robustness*."

Framing the issue at stake as a matter of costs and benefits clearly yields opposition. Especially the political aspects of the scale at which a cost and benefit should be defined, the administrative domains in which costs and benefits could be defined, and the entity which should define what a cost and benefit are yield discussion. The leading administrator refers back the national scale of the Delta Programme, the technical complexity of such an analysis, and corresponding nationally accommodated knowledge agenda as the right place to tackle this complexity. In other words the administrator sidesteps speaking out on priority issues or scales. Some however insist on an analysis, and interestingly the issue is settled by explicitly depoliticizing through introducing ambiguity by framing the analysis as something that should "*brush over"* some issues by the help of "experts" -instead of for example political decision-makers- and should not be called a decision support framework at al.

#### *5.5.1.2 frame interactions in the administrative / political decision-makers interaction context*

About 60 regional political decision-makers and some assisting high-level administrators from provinces, water boards, and municipalities participated in this decision-makers conference held in Emmeloord. The meeting is characterised by frame interactions shifting from technically focussed language towards a discussion of procedures and responsibilities as the central issue of concern. The programme director opens the meeting as follows: "*What do you, decision-makers, think of what we prepared and what does the Director General of the Ministry of Public Works* [who is present at the meeting] *need to take to The Hague* [i.e. to the national government]*"*. The programme director thus

points at the possibility that the regional political decision-makers decide over what is important and that this should be communicated to the national political decision-makers. The Director General (DG) responds: "*...what do I take with me to The Hague? Yes, but we are talking about a collective programme here, the national government is also owner, there are 5 decisions to be made in coherence* [...] *we do not make decisions which stand on their own,* [...] *we have to take in to account other sub-programmes too".* She ends her statement by throwing the issue back to the audience: "*... what does coherence* [between DPIJ and the other programmes] *mean for the IJsselmeer region?* The regional political decision-makers react by pitting regional interests against national interests: *"So is this a mismatch between DPIJ and The Hague* [central government]*? Who is determining what then?".* They also turn the statement of the DG around: *"Maybe The Hague should take care that the other programmes adapt to DPIJ?".* Then a regional political decision-maker from the DPIJ steering committee steps in: "*Of course we agree, we are all in one programme so disagreeing would be impossible",* by which the DPIJ official leaders prevented the discussion from continuing on the topic of "*who is in charge*", the DPIJ organisation or The Hague? In addition, as the DPIJ steering committee he associates with the structural power of the central government, and at the same time re-opens the discussion for input towards this structural power.

Then some regional political decision-makers started giving input on their concerns towards the DG: "*We want clarity from The Hague over what will happen, we are about to plan for housing projects and this might conflict with the 1,5 meter, so what does the DG want?"* And they refer back to her earlier statement: "*...she says she wants collective ownership?"* By which they make her problem owner of the conflicting interests of housing projects and a rise in water level. The DG responds: *"well this is difficult to take up collectively, but if possible there is a possibility to do it collectively"*. She nuances her earlier statement and creates a kind of constructive ambiguity by which she does not make herself problem owner, but does not distances herself either. Although her opponents start an implicit negotiation by puzzling over who is problem owner, the DG is not a political decision-maker like the other participants in this interaction context and therefore she is officially not in the possibility of negotiating over goals benefits and resources. Later on in the meeting this tension between puzzling over what is at stake, and powering over who decides becomes very visible. The deputy director of the national delta programme frames the DPIJ network as an *"iteration"* with national political decision making, which is coordinated by the national Delta Programme. After which the representative of the societal and business players in the IJsselmeer region poses a bold question: "*So who is actually the boss here?"* referring to the various governmental organisations involved in the "*iteration*". The deputy director of the national Delta Programme jumps in and responds: "*The House of Thorbecke tells you who the boss is"*, by which he implies that decisions are not to be made by this ad-hoc DPIJ network which is not part of the constitutional structure of Dutch political decision-making known as the House of Thorbecke.

The initial technical framing by DPIJ administrators of "*how to solve the water task*" is countered by both political and procedural frames from political decision-makers as well as some national high level civil servants. By framing procedures and constitutional arrangements as the central issue in getting the water task done, the DPIJ puzzle becomes a procedural puzzle. Although still

depoliticized, a procedural puzzle departs from a technical puzzle in the sense that discussions might concern questions like when to decide and how to decide? Questions that are not appropriate in deliberations over corner points and calculations over fresh water demands. In addition, a procedural puzzle might imply changes in relational positions through deliberating over changes in the policy making procedures: framing DPIJ as an "*iteration*" with national decision-making suggests a more consulting position of DPIJ towards the national government than "*what does the director general need to take to the Hague*", which suggests a more demanding role of DPIJ towards the national government.

By incorporating the counter frames through constructive ambiguity over rules and roles: "*Of course we agree, we are all in one programme so disagreeing would be impossible*", the DPIJ administration shows its connection with the region, but as well its position as a central player closely connected to the structural power of national government. Regional political decision-makers however, do not accept this frame incorporation by framing the process as too ambiguous. Subsequently they employ this ambiguity to frame responsibilities in their favour, or opt for clarity on with whom to negotiate: "*So who is actually the boss here?*".

#### *5.5.1.3 Outcomes*

In line with an overall technical framing initial concrete outcomes were scenario's labelled as corner points of a range of possible strategies (Delta Programma Ijsselmeergebied 2011b). The more local scaled political frames that were occasionally introduced at the Ijsselmeerdag in Almere were accommodated through frame incorporation. This led to the introduction of frames like a flexible approach and spatial planning to deal with all players involved in the complex lake's water system. The proposed flexible approach in 'navigating together' crystallized in form of a picture of a meandering river illustrating the possibility to find different routes while sharing a clear goal: an advice to the Delta Commissioner on how to reach the 1,5 meter water level rise (Delta Programma Ijsselmeergebied 2011b). Subsequent interactions between administrators and regional political representatives at the decision-makers conference held in Emmeloord yielded a process oriented framing stressing the need for flexibility to deal with complexity, and a need for process alignment with constitutional political decision-making. This managerial reframing of politically framed issues raised at the conference crystallized in a conference report in which the water task was framed as 'broadly supported' by all participants (Delta Programma Ijsselmeergebied 2011b).

In terms of relational outcomes the dominance of technical framing occasionally incorporating political frames meant that an association of the administrative office with the societal players was maintained, while at the same time keeping control over the agenda and process. In the administrative political context the reframing process was less smooth and the administrative office could only partly maintain its association through reframing the various regionally scaled political frames into more general spatial issues or procedural issues. The technical framing remained dominant and did not solve all frame conflicts, indicating a subtle relational divide between administrators and

political decision-makers.

### *5.5.2 Frame interactions and outcomes in defining preferable strategies*

#### *5.5.2.1 frame interactions in the administrative / society interaction context*

At the Ijsselmeerday held in Zwolle only administrators from the administrative office attended accompanied by some administrators from regional governments and an occasional societal representative. A newsletter in the series 'Het Nieuwe Peil' is discussed in which the proceedings of the DPIJ programme are communicated to the regional political decision-makers. The newsletter has been drafted by the administrative office and is meant as input for the next decision-makers conference for regional political decision-makers. The meeting is characterised by administrators from provinces and municipalities firmly speaking out on the technical framing in the newspaper. Headings such as "*Challenges for IJsselmeer*", "*Do you have enough information*" or "*Optimising and flexibility*" provoke opposition. They expect their political decision-makers to lose interest because there is nothing in the wording that touches upon their daily concerns or decisions to be made: "*last meeting they discussed the 'corner points' already, this time I would suggest scenario's on the spatial planning potential*[7] *involved in the programme*". Also the scale framing is questioned: "*make it concrete for the local level! Now the whole newsletter breathes a national image, local political decision-makers do not get the feeling this means anything for their municipality. This is not of interest to political decision-makers*". To keep the political decision-makers' interest they propose to frame the newsletter in local socio-economic terms focussed on decisions: "*are we again going to inform the political decision-makers, or is there this time something they can decide over?*". Finally, when the discussion is about the heading of the newsletter the director proposes the heading "*Outlook on the final advice*", the administrators of the provinces and municipalities react promptly by suggesting the heading: "*Advice to the Cabinet*". The DPIJ director replies: "*that is not what it is*", because the advice is officially to the Delta Commissioner; a special high-level civil servant. The administrators react by joking: "*then there will probably never be a signature from the regional political decision-makers*", and start laughing.

At this point in time the persistent frame differences indicate a subtle divide between DPIJ administrators and some of the regional administrators, who act as a kind of boundary workers between the social worlds of the DPIJ administration and what they frame as a rather different social world of the regional political decision-makers (Jasanoff 1994). The way in which the regional administrators frame the social world of the decision-makers as intrinsically political compared to the administrative DPIJ process underpins their concern for a deadlock: "*then there will probably never be a signature*" Without making DPIJ a more political process providing regional political decision-makers the possibility of directly negotiating with national political decision-makers -like the minister of public works-, regional administrators fear regional political decision-makers loose

7 This spatial planning potential generally refers to the potential for building houses which may yield local support and money for the municipality

interest. The frame interactions with the DPIJ director result in a slight reframing towards more local concerns, and although the administrative office aims at the political decision-makers' support, the director refuses to reframe the process into a political negotiation. The director maintains an overall administrative frame of advising a high-level civil servant which fits earlier framings of DPIJ as working towards a water task. Accordingly, the heading remains as the director proposed (Delta Programma Ijsselmeergebied 2012b).

#### *5.5.2.2 frame interactions in the administrative / political decision-makers interaction context*

The concerns raised by the regional administrators appear to be reflected in the succeeding decision-makers conference hosted in Amsterdam. The regional political decision-maker who acts as the chairman of the DPIJ steering committee attempts to present the issue at stake in a more political way to the 60 regional political decision-makers by talking about "*interests*", but maintains a rather technical framing of the issue at stake when he continues: "*The question of today is: do we agree on the information that we have at the table, and can we put our interests at the table in view of the future?* [...] *there is a demand and a supply: The demand is what do you* [regional decision-makers] *think should happen? And the supply is to provide the right information towards the people of the Cabinet. So we can influence those people by providing them the right information."* Although the political decision-maker acknowledges a political aspect to the issue, visioning about the future is still framed as a matter of "*providing the right information*".

After the presentation discussions start at cafe like round tables. At one table a discussion rather different from the presentation develops: Political municipality decision-maker A: "*Shouldn't they have thought about expectation management? This Delta Programme, we will all feel the pain, that's what we need to talk about now*". Municipality decision-maker B responds: "*we are invited, but do not actually participate as a municipality".* A water board decision-maker: *"I'm interested in how to influence the Delta Decisions, there are large interests involved".* The municipality decision-maker B again: *"compensation* [from the national government to the regional governments] *is the real challenge. To show the specific interests, and what it means for the other regional governments* [in terms of compensation] *when you push for your own interest."* Municipality decision-maker A continues: *"So what should we think of this meeting if we do not get any concreteness?",* decision-maker B: " *What do we need to wait for, I think we are put on hold*. Decision-maker A: *yes* [for DPIJ] *it is nice to say that the plans made* [by DPIJ] *are broadly supported".*

Clearly the discussion at the table is not about the necessity or content of the proposed strategies or corner points. The issue of raising the lake's water level is framed in more political terms as painful, but negotiable if made explicit. This highlights a mismatch between the nationally scaled technical framing of the administrative office and the politically framed concerns of the political decision-makers. The political decision-makers frame the mismatch as a matter of being "*put on hold*". Nevertheless these frame differences between the plenary presentations and the discussion at the decision-makers table are not being expressed in corresponding plenary frame interactions.

Although at this moment in time the DPIJ steering committee frames the issue slightly more political compared to the technical framing in the early phases of the programme, its hybrid framing of "*interests*" being expressed through "*supplying the right information*" is still not being perceived as the political framed issue the political decision-makers aim to negotiate about. Regional political decision-makers indicate that differences in framing are large, which raises suspicion and makes them not consider the occasion the right place to interact.

#### *5.5.2.3 Outcomes*

The frame conflicts that emerged at the Ijsselmeerday held in Zwolle concerning the administrative or political nature of an advice to the Delta Commissioner yielded a dominant non-political national scaled framing in the intermediary outcome presented at the decision-makers conference held in Amsterdam (Delta Programma Ijsselmeergebied 2012b). The subsequent frame differences between DPIJ administrators and political decision-makers at the decision-makers conference crystallized into a more hybrid framing acknowledging regional political interests but stressing the opportunities regional governments saw in modifying the water system. This shows an attempt of incorporating politically framed aspects of the water level rise into non-political administrative frame. In line with that, the need for alignment of decision-making processes is stressed as a managerial answer to reoccurring locally scaled politically framed issues of who's interests are being served and who is in charge (Delta Programma Ijsselmeergebied 2012a).

In relational terms the subtle divide occurring at the Ijsselmeerday in Zwolle is highlighted by the regional administrators. The administrators openly anticipate the regionally scaled political perspectives of the political decision-makers. This counter framing however, is not adopted or incorporated by the administrative office which indicates that the relational divide persisted and the administrative office remains in control. In the succeeding frame interactions at the decision-makers conference in Amsterdam the frame differences anticipated by the regional administrators do indeed occur and are partly reframed into an overall administrative frame of "*interests*" being expressed through "*supplying the right information*". In that sense the administrative office and steering committee associate with the political decision-makers. Later on however, regional political decision-makers hesitate in speaking out on their politically framed concerns and frame interactions between the administrative office and political decision-makers partly cease. This indicates at least a partial divide between the administrative office reconfirming its central administrative role by technical framing, and political decision-makers losing interest.

### *5.5.3 Frame interactions and outcomes in selecting a preferential strategy*

In the process of selecting strategies, the administrative office employed the national economic planning bureau (CPB) to conduct a cost-benefit analysis. The analyses showed that the 1.5 meter rise in water level is expensive compared to more moderate rises in water level that may be combined

with possible alternative strategies like installing new pumping stations for evacuating water into the sea (Bos and Zwaneveld 2012). This yields a clear shift in the problem framing by the administrative office. The proposed strategy is framed as follows: "*flexibility with an open view to the future*", in which "*The initial idea to raise the lake's water level* [...] *to no less than 1.5 meter is definitively shelved*" (Delta Programma Ijsselmeergebied 2013b).

#### *5.5.3.1 frame interactions in the administrative / political decision-makers interaction context*

At the decision-makers conference at the former island of Urk at the end of phase 3, a preferential strategy is discussed which is to be elaborated in phase 4. Political decision-makers are invited to vote for or against this strategy. The DPIJ director specially welcomes the municipality decision-makers at the conference. She frames the problem at stake explicitly as local by which she makes the municipality problem owner and anticipates an overall shift in problem framing of DPIJ. She continues: "*The question is how do we keep this area safe and dry. There was a plan* [refers to the Delta Committee with the proposed 1.5 meter water level rise] *and I don't have to tell you that there is no support for that plan. After 3.5 years of sweating our guts out, the good news is the 1.5 meter is off the table! There is no need for dramatic measures, the West of the country can be self-supporting, it can be done there cheaper and better. So let's agree that we won't talk about the West anymore. For now we have a strategy, the generations after us may invent things for that time, they will be much smarter".* She frames the problem as local, and by saying "*I don't have to tell you"* she associates with the municipalities. By framing the cancelation of the plan as "*good news*" she suggests a struggle followed by a victory over the "*West"* . She points at the fresh water need of the other areas in the West of the country, but immediately depoliticizes again by framing the alternative in general as "*cheaper and better"*. By saying "*let's agree that we don't talks about the West anymore*" she frames the issue as settled. And by referring to future generations as smarter and in the position of better defining solutions, she postpones the long term challenge which was prominently at the table in the earlier phases of the programme.

The Director's speech is followed by voting procedure, in which the political decision-makers who are present and 3 national high level administrators vote for or against a number of statements related to the proposed strategy of "*flexibility with an open view to the future*". The statements are framed in a depoliticized and general way: "*The story of the Steering Committee convinces me"; "Until 2050 it is decided to discharge by gravity if possible, unless pumping is needed". DPIJ considers this an absolute precondition for a safe and resilient IJsselmeer region"*, and "*The developed strategy is thé way to make the IJsselmeer area safe and resilient".* Apart from the fact that almost of all participants vote in favour of the statements, reactions after voting show ambiguous understandings and slight apathy: "*if this is thé developed strategy, than it probably is thé way, isn't it?*", and when the host of the meeting frames the voting results as "*Eastern European",* a political representative puts his electric voting-device at the table, stands up and leaves the venue: "*I go home*".

#### *5.5.3.2 Outcomes*

The administrative translation of a wide range of (political) problem frames articulated in the previous phases resulted in the commissioning of a cost-benefit analysis for determining the best option. Accordingly, instead of negotiating over political framed issues resulting in consensus on a division of costs, benefits and responsibilities at the specific decision-making bodies' account, the dominant administrative framing resulted in a calculation based on a generally specified macro-economic scale and problem framing. The outcomes of this calculation lead to postponement of decisions on large modifications in the water system and the corresponding water level rise (Bos and Zwaneveld 2012, Delta Programma Ijsselmeergebied 2013b). A limited modification in form of a more flexible water level was proposed instead. After the administrative office translated these results in rather general statements at the decision-makers conference at Urk, the voting rounds showed wide support for these general statements and the subsequent official conference report framed the outcome as: "*Political decision-makers agree on outline DPIJ strategy*" (Delta Programma Ijsselmeergebied 2013b).

Accordingly in relational terms the depoliticized cost benefit analysis provides the discursive room to re-associate with the regional political decision-makers. Remaining frame differences have been reframed in rather ambiguous statements on a preferential strategy, which most of the regional political decision-makers associate with. Hence, the administrative office keeps control over the agenda and the process, while reframing the issue at stake into general technical statements that avoid conflict and allow for association with a wide variety of political and societal players.



## 5.6 Discussion

### *5.6.1 Puzzling and powering by reframing the climate issue as technical*

Both the problem and the solution as initially framed by the administrative office of the Delta Programme for IJsselmeer showed a strong emphasis on the role of technology, management or organisation in the problem at stake. Less is referred to underlying values, interests and consequences of what is framed as a water task or a modernisation of the water system. Strikingly, the question of who benefits from the proposed 1,5 meter water level rise (presumably not so much the IJsselmeer region but rather the rest of the country) has never been explicitly discussed, until a cost-benefit analysis in the final phase preludes the postponement of the 1,5 meter option on economic grounds. The 'task' is taken for granted. We summarize this framing as *technical framing*. The motto of technical framing appears to be: '*getting things right*', which questions knowledge, means and procedures for achieving a water task. In the studied interactions technical frames are mostly employed by administrators, which is understandable considering their intrinsically non-political role in policy making processes. Framing IJsselmeer as an outdated water management plan of the 1930s, which has to be renewed to climate proof the country also implies a geographical and corresponding administrative scale at which the problem is manifest. This scale framing (van

## Table 5.1. Frame interactions and outcomes

| Studied phases in deliberative governance of DPIJ | Interaction context | Frame interactions | Substantial outcomes | Relational outcomes |
|---|---|---|---|---|
| Phase 2. Identifying possible strategies | Administrative / Societal | Dominant nationally scaled technical framing incorporation with other more regionally scaled political arguments by introducing a 'flexible approach' framing | Official conference report of both the Ijsselmeerday and decision-makers conference, which highlights the corner point scenarios, and stresses a need for 'navigating together' with all governmental organisations. To deal with wide variety of issues involved the importance of 'spatial planning' as a key element is mentioned. A wide support from regional players for the DPIJ activities is mentioned | Administrators central role in developing possible strategies, associating with societal players, no conflict |
| | Administrative / Political | Nationally scaled technical framing gets reframed into procedural framing. Frame conflicts on who is problem owner, implying a conflict on who is in charge. | | Subtle divide between DPIJ administrators, national administrators and regional political decision-makers. |
| Phase 3. Selecting promising strategies | Administrative / Societal | Dominant nationally scaled 'visioning' framing in which the process of gathering knowledge is claimed to play a central role. Frame conflicts occur between DPIJ administrators aiming for an advice towards the 'Delta Commissioner' (a special high level civil servant) and the regional administrators aiming for an advice addressed to the minister. The regional administrators anticipate a political negotiation between regional and national political decision-makers. | A newsletter to the regional political decision-makers suggesting a visioning process towards an advice for the Delta Commissioner | Subtle divide between DPIJ administrators and regional administrators who anticipate regional political decision-makers political framing |
| | Administrative / Political | Dominant 'visioning' frame incorporating some political frame elements in an overall administrative frame in which gathering the right information is central. Other regionally scaled political frame interactions are shared among regional political decision makers but are not plenary articulated in interaction with the DPIJ administrators. | Official conference report mentioning political framed issues raised by politicians, but highlighting the 'opportunities' decision-makers perceive in working towards the water task. The request for process alignment with constitutional decision-making is highlighted, as well as the need for including regional socio economic scenarios. | Partially relational disconnect between DPIJ administrators and regional political decision makers |

| | | | | |
|---|---|---|---|---|
| Phase 4. Selecting a preferential strategy | Administrative / Political | The DPIJ administrators reframe their scale framing from a nationally scaled technical framing towards a regionally scaled hybrid framing of a water task that can be done better by others. A cost benefit analysis is employed in this regionally scaled efficiency framing to conclude that the task is taken care of cheaper elsewhere. | Official conference report stating that the regional political decision-makers agree with a flexible water level for the short term, and a postponement of decisions for raising the lakes water level substantively. | DPIJ administrators re-associate with regional political decision makers through incorporating regional scaled political frames in explaining the 'shelved plans' of the 1,5 meter water level rise. |

Lieshout et al. 2011, Warner et al. in press) emphasizes the function of the lake system for the water safety and freshwater availability for the nation as a whole but omits regional or local issues of concern, like potential inundation of local recreation areas. This nationally scaled technical framing emphasizes the technical and organisational complexities, implying a need for experts and national administration.

In the frame interactions in both interaction contexts national scaled technical framing is countered by other frames mainly from regional political decision-makers and societal players focussing on different scales, norms and values. Administrators deal with this frame conflict by either frame disconnection or frame incorporation. Hence, administrators either omit counter frames by referring to other venues, moments or entities as more relevant to the counter frames, or administrators absorb the counter frames by introducing ambiguity like a 'flexible approach' (Dewulf and Bouwen 2012). In combination with the relative large number of administrators in the network, these framing strategies made the nationally scaled technical framing dominant and self-referential. In line with Torfing (2009) this shows that making sense of issues as national technical problems does not only imply a puzzle of what is at stake but simultaneously brings specific roles and identities to the fore; in this case experts and national administrators. Counter intuitively, technical framing therefore also implies powering.



### *5.6.2 Puzzling and powering by reframing the climate issue as political*

Nationally scaled technical frames were frequently countered by what we summarize as *political* frames. Political frames are frames that imply social competition as the problem and the solution. This can be competition over interests, resources, values, identities or ideas, and accordingly solutions always imply winners and losers, are essentially temporal, and can be reached through negotiation (Dewulf and Bouwen 2012). The motto of political framing appears to be: '*playing a game over priorities*'. Correspondingly, regional political decision-makers often framed the issue at stake as a division of costs and benefits in which they as regional political decision-makers could win or would have to pay a price. In the frame interactions with the administrators, regional political decision-makers also introduced different scales at which the politically framed problems and issues were perceived. Problems were framed as a matter of protecting the local economy, business opportunities

or as a conflict with local decision-making procedures. This local scale framing conflicted with the national scale at which the administrative office initially framed the problem.

In addition to the notion that political problems imply politicians to solve the problem, the scale at which the problem is framed not only indicates at which scale measures should be taken, but also has implications for who is supposed to be problem owner and who is the logical player to be in charge of solving the problem. Correspondingly, regional political decision-makers framed the deliberative governance process as too technical, too focussed on national issues, or searched for players to share political frames with in order to negotiate over standpoints and concrete plans. Counter intuitively political framing is therefore also a matter of puzzling over what is at stake (Heclo 1974). Because the administrative office and regional political decision-makers did not have political, technical or scale frames in common, interactions lead to hybrid frames like process frames and procedural frames. Although conflicting, interactions did not lead to substantive negotiation (Dewulf and Bouwen 2012).

### *5.6.3 Depoliticization in deliberative governance*

Apart from the reason that technical framing reconfirmed the central role of administrators in a policy making context, there might be other causes for the persistence of technical frames. Different from the official Dutch decision-making processes and the traditional institutionalised systems of interest intermediation between the state and societal interest groups (Schmitter 1974), the DPIJ deliberative governance process takes place on an ad hoc voluntary basis, with individuals participating rather than organised interest groups. Process outcomes are not legally binding and participants may freely exit the process once outcomes do not suit them. The administrative office however, is officially tasked by national government to develop a 'broad based' advice to the delta commissioner, which implies keeping all participants on board and maintaining legitimacy and authority among the participants. Framing the climate adaptation problem as a solidarity problem, or a problem of dividing costs and benefits over all participants would risk politicizing the administrative office doing the framing. At the same time this would risk a process where players who would face outcomes negative to them, or marginalisation in terms of support, and subsequently might exit the deliberative process turning to other more institutionalised arenas –such as members of parliament- for winning powerful support and reaching their goal. This would obviously decrease legitimacy of the deliberative governance process towards formal national decision-making. Because the nationally framed water task was not accounted for in the network by a national politically elected decision-maker with whom regional political decision-makers could negotiate, a logical thing coordinating administrators could do was to depoliticize the issue at stake. Accordingly, due to the absence of national political officials in the deliberative governance network, the open ad hoc character of the network and the non-political nature of the administrative office, framing problems and solutions as depoliticized technical efficiency issues might have become an understandable strategy of the administrative office in the first place.

### *5.6.4 Political bystander-effects in deliberative governance*

In line with what van Eeten (2001) explains as the peculiar position of politicians in deliberative democracy, the hesitance and inaction of regional political decision-makers towards the end of the deliberative process could be interpreted as the decision-makers' fear for taking stances in a game with unclear rules over ambiguously understood technical problem frames implying unclear player dependencies. Darley and Latane (1968) describe a comparable process in social psychology where the characteristics we discussed for the deliberative governance arrangement above: 1) diffusion of responsibility 2) ambiguous understandings and 3) limited cohesiveness among players, lead to a *bystander-effect* among actors who collectively hesitate to take action in case of an emergency. Accordingly, the preconditions of Darley and Latane (1968) are met in this case. Our study therefore could indicate how a semi-open ad hoc deliberative governance context parallel to traditional systems of interest intermediation and decision-making may lead to a dominance of non-political frames, which empower administrators and lead to what we define as a *political bystander-effect* among political decision-makers.

## 5.7 Conclusions

Inspired by authors who claim that deliberative governance is a means to deal with the uncertainty and plural understandings associated with climate change, we studied ad hoc deliberative governance of adaptation to climate change in the Delta Programme IJsselmeer (DPIJ) network context. To make sense of deliberative governance through the classical concepts of puzzling and powering we proposed frame interactions as their conceptual interplay. Accordingly, our research question was: how did frame interactions shape the substantial as well as the relational outcomes in the deliberative governance arrangement of Delta Programme IJsselmeer?

Frame analysis of the language-in-interaction in the deliberative governance process showed what we define as a dominant nationally scaled *technical* problem framing employed by the administrators of the DPIJ administrative office: This *technical* framing does not question the underlying problem, costs and benefits or the possible end situation as preferred by the various players in the governance network. The technical framing emphasized the problem as a 'task' that had to be fulfilled and requires technical and managerial measures to do so. In addition we observed how societal representatives and regional political decision-makers in the network posed more local or regionally scaled *political* frames, questioning norms, values and goals. Initially these frame differences led to frame incorporation of political frames into more hybrid frames, though fitting an overall administrative approach to a water task. Frame differences did not led to negotiation.

In terms of substantial outcomes the technical and procedural frames crystallised in intermediary policy outcomes like technical scenario's that were framed as 'corner points' and programme reports reframing the initial technical 'water task' into a 'flexible approach'. Therefore we can say that frame interactions shaped the classically defined puzzling process (Heclo 1974). However, this does not

mean all frame differences assimilated into larger, different or more ambiguous frames. Towards the end of the governance deliberations the political frames employed by regional political decision-makers ceased being articulated in the interactions with the DPIJ administrative office. Therefore frame differences persisted to exist and the political frames were only marginally accommodated in the substantial outcomes.

In addition to the substantial outcomes these persistent frame differences indicate how frame interactions also affected relational outcomes in deliberative governance. The persistent nationally scaled technical framing reconfirmed the coordinating role of a nationally tasked administrative office and its experts. In the interaction context with regional political decision-makers the decision-makers introduced local scaled political frames, which yielded frame incorporation into more managerial frames. These managerial frames emphasizing alternative roles and responsibilities in the process and occasionally questioned the central role of the administrative office. Persistent frame differences led to a relational divide between the administrative office and the political decision-makers. This shows how frame interactions not only shape the puzzle over what is at stake, but also the relational outcomes and positions, and therefore imply a process of powering.

Although the dominant technical frame interactions resulted in a de-politicized discussion which did not show signs of controversy, clear decision-making action or political initiatives from a wide range of regional political decision-makers was not visible either. Initial plans were postponed based on a nationally tasked and depoliticized cost benefit analysis. The combination of deliberative governance, a dominant technical framing, and a degree of apathy among political decision-makers could be understood as what others have labelled the peculiar situation of politicians in deliberative governance (van Eeten 2001), but might be explained as a process akin to the bystander effect in socio-psychology (Darley and Latane 1968), or what we define as a *political bystander effect* in governance. The combination of ambiguous understandings in deliberative governance, its meagre institutionalisation and unclear player dependencies correlate with the preconditions of Darley and Latane's bystander effect: 1) ambiguous understandings, 2) limited cohesiveness among players and 3) diffusion of responsibility.

# Chapter 6

## Do state traditions matter? Comparing deliberative governance initiatives for climate change adaptation in Dutch corporatism and British pluralism[8]


### Abstract

In the emerging field of climate adaptation deliberative governance initiatives are proposed to yield better adaptation strategies. However, introducing these network-centred deliberations between public and private actors may contrast with traditions of interest intermediation between state and society. This paper shows how these so called state traditions affect newly set up deliberative governance initiatives. Because of the similarities in geographical characteristics and the differences in state tradition we conducted a qualitative case study comparison of Dutch and British water management. Our comparison is twofold. First, we compare deliberative governance initiatives in the different state traditions of the Netherlands and Britain. Second, we compare the newly set up deliberative governance initiative to an existing policy regime mainstreaming climate adaptation in a similar state tradition, in our case the Netherlands. We find that: 1) Deliberative governance initiatives in the neo-corporatist state tradition of the Netherlands yields learning but shows apathy among politically elected decision-makers compared to deliberative governance initiatives in the pluralist state tradition of the UK where clearly defined rules and responsibilities yields negotiation and action. 2) A typical neo-corporatist policy regime mainstreaming climate adaption in a neo-corporatist state tradition yields effective and legitimate policy formation but lacks learning.



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## 6.1 Introduction

The plurality of problem definitions or frames employed in the societal discussion about adaptation to climate change sparked proposals for more deliberative initiatives of climate adaptation governance. These horizontal forms of network centred policy formulation are claimed to do justice to this plurality in societal frames through deliberations between public and private actors compared to traditional institutionalised state centred decision-making (John S. Dryzek, 2010; Feldman, 2012; Hulme, 2009; Manuel-Navarrete, 2010; Rojas, Magzul, Marchildon, & Reyes, 2009; Roncoli, et al., 2009). In addition to this normative standpoint, the openness to societal actors and the capacity to learn over various frames in deliberative governance initiatives is believed to bring effective and legitimate adaptation policies (Dovers & Hezri, 2010; Nelson, Howden, & Smith, 2008; Pahl-Wostl, 2009; Shackley & Deanwood, 2002; E. L. Tompkins, Lemos, & Boyd, 2008; M. J. Vink, Dewulf, & Termeer, 2013).

However, even though climate adaptation emerged on the policy agenda only recently, climate adaptation is not a standalone issue but is generally dealt with in existing state centred policy fields such as flood safety or freshwater availability. The governance of climate adaptation and its accommodation of societal frames and vested interests traditionally depends on how state centred policy making is organised. Following literature on the role of the state in society, Adger et al. (2013) have referred to cross national differences in state-society relations as different social contracts determining a division of responsibilities, powers and mutual expectations in climate adaptation. Similarly, scholars in the field of policy sciences have discussed the crystallisations of long term patterns of 'intermediation' between the state and societal interest through institutions and policy making routines (Schmitter, 1974; Wilson, 1983). These state traditions vary in their institutionalised patterns of mutual dependencies between society, organised interest groups and the state, and therefore yield different institutional arrangements, or policy regimes of norms and interaction patterns (Biesbroek, 2014; Dyson, 1980; Howlett, 2009; Koppenjan & Klijn, 2004; Massey & Huitema, 2013; Schmitter, 1974; Wilson, 1983). Proposing more deliberative governance initiatives as uniform ad hoc arrangements for effectively governing the various societal problem definitions associated with the emerging issue of climate adaptation therefore raises questions on how this empirically fits different state traditions and compares to existing policy regimes addressing climate adaptation.

While we do not aim to draw generalizable conclusions what causes differences in deliberative governance initiatives, or aim to add to the well-established body of literature on state tradition or policy styles, we do take this literature as an intriguing background to understand processes of deliberative governance initiatives in the emerging field of climate adaptation, and what might explain cross- state differences. Therefore, this paper takes a qualitative approach to gain an in-depth understanding of how new deliberative governance initiatives are set up en how these function in different state traditions. The paper compares deliberative governance initiatives in terms of 1) institutional arrangements, 2) actors involved, and 3) deliberative processes. To understand differences between deliberative governance and traditional policy making the paper compares

deliberative governance with existing policy regimes dealing with climate adaptation challenges in the same state tradition. We focused on water management in the United Kingdom and the Netherlands. Firstly, water management represents a typical policy field in which climate impacts are expected to materialize and within which new deliberative governance initiatives proliferate. Secondly, both countries share geographical characteristics of lowland coastal areas prone to sea level rise and changing precipitation patterns, yet have different traditions in state organisation and water management policy regimes (H. Cook, 1998; S. Kuks, 2002; Wilson, 1983).

The paper poses two questions: 1) How do framing processes and actor involvement of a deliberative climate adaptation governance initiative in the Dutch neo-corporatist state tradition compare to framing processes and actor involvement of deliberative climate adaptation governance initiatives in the British pluralist state tradition? 2) How do framing processes and actor involvement in deliberative governance initiatives of climate adaptation compare to the framing processes and actor involvement in traditional water management policy regimes taking care of climate adaptation in Dutch neo-corporatism? For answering these questions the next section of this paper will elaborate on the conceptual foundations of state traditions and policy regimes, which we contrast with scholarly ideas on deliberative governance. We propose framing theory as cross-cutting for understanding how deliberative process actually play out in different institutional contexts. After that we describe our methodological approach, case study selection and how we conducted field research. In our result section we contextualise our conceptual framework for climate adaptation in the Dutch and British context after which we zoom in on three concrete climate adaptation governance case studies and draw conclusions on how both state traditions affect the deliberative governance processes under study.



## 6.2 State traditions, policy regimes and deliberative governance initiatives; conceptual foundations

### *6.2.1 Institutionalised interest intermediation*

Where in continental European history the state gained a central role as an idea and an institution safeguarding the nations' public interest, in the Anglo-Saxon world such as the UK the state remained relatively underdeveloped in taking care of this national public interest. Contrary to continental European tradition, where on a philosophical level some authors claim the state to be an administrative institution which is positioned in-between the politically elected government and the governed, policymaking in the UK can be understood as the direct execution of parliamentary will. In theory this means that despite heated opposition a (regional) majority interest can win without interference of 'a state' as an institution representing the nations' collective interest (Dyson, 1980, pp. 36-44, 51). Specific societal interests might also compete for policy making power outside of parliament but through regulated forms of what Schmitter (1974) defines as interest intermediation between the state and organised interest groups. Classical policy studies focussing on systems of interest intermediation highlight the cross national variations in these systems as

different state traditions and distinguish concrete policy regimes of institutions, regulation and underlying organisational values within these state traditions that more or less correspond with policy making traditions (Dyson, 1980; Heclo, 1974; Howlett, 2009; Schmitter, 1974; Wilson, 1983). The Dutch tradition in interest intermediation between the state and society can be characterised as an institutionalised negotiation process between a limited number of organised vested interests and the state, often referred to as neo-corporatism, or in Dutch 'the polder'. In the UK however, the tradition in interest intermediation is referred to as pluralism showing much less institutionalised patterns and more room for a wide variety of societal interest groups to compete for a place in the policy making process outside parliament (Lijphart, 2012; MR Prak, 2008; M. Prak & Luiten van Zanden, 2013; Schmitter, 1974; Visser & Hemerijck, 1997; Wilson, 1983).

### *6.2.2 Deliberative governance initiatives*

Apart from prolonged institutionalized patterns in interest intermediation discussed as state traditions and policy regimes, scholars in policy sciences have highlighted an empirical trend towards less institutionalized practices of interest intermediation and policy making. Although conceptually still imprecise, these forms of governance can be characterized processes of deliberations through inter-organizational networks which come with a withdrawing state government (Kickert, Klijn, & Koppenjan, 1997; Rhodes, 2002; Sabatier, 2005). Contrary to the institutionalized negotiations that characterize state traditions like neo-corporatism, this form of governance may be conceptualized as institutionally 'decentred', or network centered, in the sense that the institutional capacity to regulate the process of governing remains under developed: Policy outcomes are less dependent on a sovereign regulating authority responsible for decision making, but more on a market like co-production of equal players negotiating trough language (Bevir & Rhodes, 2003; Howlett, 2009). This empirical notion of a decentred or network approach to policy making correlates with the definition of deliberative governance often prescriptively adopted in climate adaptation studies as discussed in our introduction section. Because these prescribed deliberations go beyond empirically observed genuine trends towards more 'decentred' governance, we choose to focus on intentionally initiated governance deliberations between public and private actors. We defined these initiatives in line with Dryzek (2010) as deliberative governance initiatives that are increasingly employed by governments to involve society in policy making in different ways than through democratic elections or institutionalized forms of interest intermediation. These initiatives often get shape as temporal policy programmes discussed above, but may also concern more structural decentralizations of policy execution toward a wide variety of regional or local public and private actors. In all cases deliberations take place in-between institutions rather than within. However, not all state traditions or policy regimes seem to allow for ad hoc deliberative governance initiatives. Where pluralist traditions show similarities with deliberative governance considering a wide variety of societal actors traditionally involved and a relatively moderate role for the central state, neo-corporatist traditions show a stronger role of the state, a high degree of institutionalization, hierarchy and a limited amount of preselected societal actors involved.

### *6.2.3 Mainstreaming or ad hoc deliberation: operationalizing the climate adaptation policy process*

As Biesbroek et al (2010) has indicated, different governments have adopted different approaches to govern societal adaptation to a changing climate. These differences may become visible through ad hoc deliberative governance initiatives, but often got shape as extensions of existing policies or as a new element in existing policy regimes. Scholars have labeled these extensions as forms of mainstreaming (Smit & Wandel, 2006; Swart & Raes, 2007). Mainstreaming climate adaptation will leave traditional policy regimes and corresponding systems of interest intermediation largely unchallenged. Ad hoc deliberative initiatives however, might contrast with or parallel traditional policy regimes as it might involve new actors, new ad hoc routines and potentially bypasses existing policy regimes, or has to feed back into existing regimes for official decision-making. Understanding tangible differences between policy processes mainstreamed in existing regimes or initiated as deliberative governance requires a shift in focus toward the practical level of actors actually interacting in the policy processes. To allow us to reconstruct the differences in processes of policy making and corresponding interest intermediation in different contexts we draw upon the work of Heclo (1974) and others (Culpepper, 2002; Hall, 1993; Visser & Hemerijck, 1997) that understand actor centered processes as an interplay of puzzling over what is at stake, and powering over who gets what position in the policy process. Hoppe (2011) adopted the idea of policy actors puzzling and powering in a more 'on the ground' definition of policy making through deliberations with society. According to Hoppe and others the question who participates in defining or framing what is at stake can be considered central to concrete processes of puzzling and powering (Art. Dewulf, 2013; Hoppe, 2011; Schön & Rein, 1994; M. J. Vink, Boezeman, Dewulf, & Termeer, 2013; M. J. Vink, Dewulf, et al., 2013). Frames take shape as short storylines or metaphors, explicitly or implicitly saying something about the cause of the problematic reality -what is- and at the same time take a moral standpoint towards this reality pointing towards possible solutions -what ought to be. Accordingly, in policy deliberations in whatever state tradition, policy regime or deliberative governance initiative, a frame may function as a puzzling device in defining what is at stake, but may at the same time help organizing power by defining the issue at stake and posing a moral standpoint towards the issue at stake in relation to the other actors and frames involved in the policy process.

## 6.3 Methodology

### *6.3.1 Methodological approach*

We applied a qualitative constructivist approach in doing comparative case study research. We did so for gaining in-depth understanding how processes of deliberative governance initiatives play out in different state traditions, and how these processes compare to climate adaptation mainstreamed in existing policy regimes. Although we are aware of the limitations of case study research in drawing general conclusions on cause-effects in policy research, we follow Flyvbjerg (2006), Gerring (2004) and Thomas (2011) in their assessment of comparative case study research as a method for

gaining understanding of the non-linear in-depth relations between a wide variety of variables in context. We apply case study research to nuance general theory and intuitions on deliberative governance initiatives in the emerging field of climate adaptation. To do so we conduct two separate comparisons: 1) similar deliberative governance initiatives in the emerging field of climate adaptation are compared on the basis of different state traditions in which they are embedded, and 2) a deliberative governance initiative in the field of climate adaptation is compared to an existing policy regimes that mainstreams climate adaptation in the same state tradition.

Because the neo-corporatist state tradition is theoretically most distinct from the open character of deliberative governance we took a Dutch deliberative governance initiative of climate adaptation in regional water management as our point of departure. For the selection of our second comparable deliberative governance case in a different state tradition we choose a British regional initiative in relation to water management for its comparable geographical characteristics and its state tradition being different from the Dutch tradition and more closely related to the limited role of the state as represented in deliberative governance ( John S. Dryzek, 2010). For our second comparison we once more took the Dutch deliberative governance initiative as our point of departure which we this time compared with climate adaptation taken care of in the existing regional Dutch water policy regime. With this second comparison we were able to understand the empirical difference between what we theoretically defined as a deliberative governance initiatives and policy making in a traditional policy regime which mainstreams climate adaptation in existing policies.

### *6.3.2 Case selection*

For the first comparison we selected two cases which represent different state traditions but share novel deliberative governance initiatives on water management adaptation to climate. In the case of neo-corporatist Netherlands we selected the governmental initiated multilevel deliberative governance initiative of the Dutch Delta Programme for the *Ijsselmeer* region (DPIJ). We selected this programme because it represents a rather innovative and unique, limited institutionalized horizontal deliberative governance approach in the Dutch neo-corporatist context which corresponds with what is often proposed in climate adaptation literature. The initiative materialised in form of a policy programme relatively open to any regional societal actors willing to participate. This resulted in representatives of various governmental sectors and layers, as well as civil society representatives, stakeholders and political elected decision-makers deliberating over how climate adaptation should take place in the lake they all geographically related with (Delta Programma Ijsselmeergebied, 2011; Ijsselmeergebied, 2011; A. Van Buuren, Vink, & Warner, 2014; M. J. Vink & Mulligen, 2013).

For pluralist UK we selected the deliberative governance initiative embedded in the Regional Flood and Coastal Committees (RFCCs) of Anglia in the UK. We selected this initiative because it represents a novel deliberative governance approach to climate adaptation in water management compared to earlier national agency centred policy making in the same field. Contrary to the

unique deliberative governance initiative in the Dutch climate adaptation context, our British case represents a much wider applied initiative. Throughout most of the low laying parts of the UK the RFCCs are characterised by regional and local public and private actors deliberating over how climate adaptation should take place in water management without national government taking the lead. This comparison could yield in-depth understanding of how deliberative governance initiatives can become institutionalised and how this relates to the state tradition.

For our second comparison we selected the unique deliberative governance initiative in the Netherlands discussed above, which we compared with a traditional water management policy regime in the Netherlands dealing with climate adaptation and referred to as 'Dry feet 2050'. We selected Dry feet 2050 because it can be classified as an archetypal Dutch regional governmental centred programme on flood safety issues which mainstreams the potential impacts of climate change in their flood safety policies (D. Boezeman, Vink, Leroy, & Halffman, 2014). The programme is characterised by institutionalised decision-making. In line with the neo-corporatist state tradition the provincial authority takes the lead in this regional programme and water board authorities follow together with a couple of traditionally determined preselected organisations representing vested interests. Deliberations take place through hierarchical institutionalised decision-making patterns and informal routines.

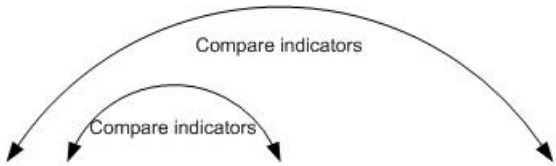
### *6.3.3 Data collection and analysis*

We collected data during the policy trajectories under study. For the Dutch cases we conducted research between 2010 and 2013 which overlaps with the programme duration of DPIJ (2010-2014) and Dry feet 2050 (2010-2014). For the British case interviews were conducted and document analysis was done during the same period. Our data consisted of three parts. We used project documents and textual information on the institutional arrangements of the projects. We additionally used textual recordings or notes of project meetings, stakeholder meetings and steering committee meetings. This was complemented by interviews with project officials and key stakeholders.

To determine how concrete policy processes played out in neo-corporatist compared to pluralist state traditions, or deliberative governance initiatives compared to existing policy regimes we describe 1) the institutional arrangements embedding the policy deliberations. This includes laws, regulations and ad hoc project rules and responsibilities. 2) The corresponding actors involved in the deliberations. We describe what responsibilities public officials and private actors have, what roles they play, and whether and how these change during the process. 3) The framing processes that follow the previous and characterize the deliberations. We discus problem framing, meaning how the problem is officially framed, how these framings develop during the interaction processes, (A. Dewulf, et al., 2009; Schön & Rein, 1994; M. J. Vink, Dewulf, et al., 2013), and scale framing, relating to the problem scales different actors use during the process (van Lieshout, Dewulf, Aarts, & Termeer, 2011) and what the implications of these framings are for actor dependencies and

negotiations.

We started with the theoretically odd case of deliberative governance in the theoretically defined neo-corporatist state tradition of the Netherlands, which we compare with a comparable governance arrangement in British pluralism of the UK. To understand the empirical difference of what we theoretically defined as deliberative governance in the Netherlands, we followed our first comparison with a second comparison with a traditional policy making regime mainstreaming climate change in its policies. In both comparisons we used the same indicators for classifying the deliberative process and the institutional arrangements. The method of analysis is summarised in figure 6.1.




| Case / Indicator | **Case 1** Deliberative governance initiative of the "*Delta Programme Ijsselmeer*" In corporatist Netherlands | **Case 2** Deliberative governance initiative of the *"Anglian Regional Flood and Coastal Committees"* in British pluralism | **Case 3** Traditional policy regime mainstreaming climate adaptation through "*Dry feet 2020*" in corporatist Netherlands |
|---|---|---|---|
| Institutional arrangement | | | |
| Actors involved | | | |
| Problem & scale framing during process | | | |

**Figure 6.1. Comparative analysis of deliberations in climate adaptation governance**

## 6.4 Contextualising deliberative governance initiatives in Dutch and British climate adaptation

In 2008 a national state committee set climate adaptation firmly on the Dutch political agenda. However, no overall national climate adaptation policy was formulated. Instead, the committee framed the issue as a central element in existing water management policy which resulted in a national act concerning flood safety. Due to the lack of an overall national climate adaptation policy, climate adaptation gained little attention in other policy fields and became primarily a national water issue (G.R. Biesbroek, 2014; Daan Boezeman, Vink, & Leroy, 2013; M. J. Vink, Boezeman, et al., 2013). This implied that climate adaptation was taken care of in the national water management policy regime. In line with the Dutch neo-corporatist tradition this policy regime shows an institutionalised decision-making tradition from medieval periods onwards in which vested interests play a central role through local water boards. However, with a changing climate emerging on the policy agenda and some recent high-water events, the Dutch government

not only developed new flood safety legislation but also started deliberative governance initiatives regionally, which paralleled the neo-corporatist policy regime. Initiatives like Room for the River and more recently the Dutch Delta Programme for Lake IJssel reflect a tendency to organise policy formulation and implementation in a more decentralised open ad-hoc fashion (Bourblanc, Crabbé, Liefferink, & Wiering, 2012; Buuren, Klijn, & Edelenbos, 2012; Disco, 2002; Dolfing & Snellen, 1999; Koningsveld, Mulder, Stive, Van Der Valk, & Van Der Weck, 2008; S. M. Kuks, 2009; M. Prak & Luiten van Zanden, 2013; M. J. Vink, Boezeman, et al., 2013).

In the UK the emergence of climate adaptation on the policy agenda resulted in the formulation of a national climate act, which at a national level went beyond specific policy fields. Contrary to the Dutch context, the act enhanced a rather managerial approach to climate adaptation as a crosscutting regional issue. By formally decentralizing climate adaptation responsibilities, regional public and private organizations were assigned to make policies at their administrative scale. National government only coordinated their regional activities in various policy fields towards nationally set values (G.R. Biesbroek, 2014; Boyd, et al., 2011; Massey & Huitema, 2013; Swart & Raes, 2007; Emma L Tompkins, et al., 2010). This resulted in climate adaptation being mainstreamed in regional water management policy making. Corresponding with this pluralist approach, British flood protection shows a policy tradition where for a long time local society rather than the state operated as the primary policy actor (H. Cook, 1998; H. F. Cook, 2010; John S Dryzek, Hunold, Schlosberg, Downes, & Hernes, 2002; Pottier, Penning-Rowsell, Tunstall, & Hubert, 2005; Arwin van Buuren, Edelenbos, & Warner, 2012). Centuries after the Dutch started to centralise flood management through state organisations, in 1930 centralisation of tasks began to occur in England by the establishment of the national Land Drainage Act. The act involved the establishment of regional Catchment Boards to provide flood defences and drainage in certain areas (H. Cook, 1998; H. F. Cook, 2010). The creation of Regional Water Authorities in 1974 led to flood control tasks becoming shared between these regional entities, local authorities and internal drainage boards (IBDs) (Benson, Jordan, Cook, & Smith, 2013). Although pluralist in terms of the variety of (societal) organisations involved, deliberation in decision-making became restricted to rather technocratic regional authorities and IDBs, whose umbrella group, the Association of Drainage Authorities, was seen as dominated by land-owner vested interests (Purseglove & Britain, 1988). This regional governance structure was reformed under the Water Act 1989, and came in 1996 under the supervision of the Environment Agency (EA). Regional Flood Defence Committees (RDFCs) were also created alongside the centralised EA, comprised of Agency actors and local authority representatives. Despite the often discussed pluralist British state tradition, at this point centralised state control negotiating with vested interests made the water policy regime actually seem more neo-corporatist than pluralist. Similar to the Dutch situation, climate change in combination with high water events in 2007 made the British government reconsider its flood protection policy regime and proposed elements of deliberative governance.

## 6.5 Governance of climate adaptation in three cases

### *6.5.1 Deliberative governance initiatives in a neo-corporatist state tradition: 'the Dutch Delta Programme Ijsselmeer'*

The Dutch state committee drafted an advisory report to the Dutch government in 2008. The report was based on rather extreme climate scenario's pointing towards an urgent need to 'climate proof' the low laying Netherlands accommodating a majority of its 17 million inhabitants and economic activities at or below sea level (Daan Boezeman, et al., 2013; Delta Commissie, 2008). With the strong emphasis on climate change as the main reason for action high on the political and societal agenda, the framing of the advisory report supported the committee in legitimizing its drastic recommendations (M. J. Vink, Boezeman, et al., 2013). In line with the Committee's drastic recommendations the Dutch government initiated the Delta Programme in 2010.

#### *6.5.1.1 Institutional arrangement*

The Delta programme is coordinated by a special state official ('Delta Commissioner') who acts under the responsibility of the Minister of Public Works and is legitimized by new national legislation; a Delta Act (Delta Programma, 2010). The Delta Commissioner is to prepare so-called Delta Decisions to be made by government every five years (Delta Programma, 2010). One Delta Decision, planned for 2015, is whether to raise the water level in the country's largest freshwater lake 'Ijsselmeer' by 1,5 meter. The initial plan of raising the lake's water level was put on the policy agenda by the Delta Committee aiming for an enlarged freshwater reservoir anticipating increased future summer droughts and to a lesser extent increased flood safety in view of decreasing discharge capacity to the raising sea level of the adjacent Waddensea. Accordingly, the Delta Programme contains a sub-programme for the Ijsselmeer region (DPIJ), which has been established to prepare the Delta Decision parallel to constitutional decision-making structures. The decision could heavily impact on several waterfront towns with low-lying traditional quays and harbors attracting many tourists. But also some nature reserves face permanent inundation in case the intended 1.5m rise in water level will be sustained, and some low-lying industrial areas face flooding (Delta Programma Ijsselmeergebied, 2011).

Anticipating the potential impacts on the region, regional governments adjacent to the lake organized themselves in a 'Ijsselmeer'-group opposing the initial plans. After the establishment of DPIJ this Ijsselmeer group was incorporated in a broad deliberative governance network of about 300 public and private actors initiated by an administrative office established for DPIJ. The administrative office was made accountable to a steering committee consisting of 4 appointed representatives from all regional politically elected decision-makers. The DPIJ deliberations were presented as a bottom-up governance process (Delta Programma, 2010). As the deputy director of the DPIJ explained to over 100 public and private actors in one of the first network meetings, "climate is changing, the Ijsselmeer water system is running into its limits, and we want to cooperate

with you in finding ways to adapt the water system".

#### *6.5.1.2 Actor involvement*

During the first phases of the programme the stakeholder meetings were set up by the DPIJ administrative office as knowledge-sharing meetings. Over 300 public and private actors from the Ijsselmeer region were invited to get to know each other and to share knowledge about their insights in the lake's water system. Actors concerned regional administrators, experts, regional politically elected decision-makers and representatives of societal interest groups and business. Although the actors got ample room for discussing, setting agenda's and taking part in workshops, the administrative office organized most meetings, send invitations, and hence operated as a gatekeeper organization (Bache, 2000; Bache, George, & Rhodes, 1996; Barzilai Nahon, 2008). In the final phases the network meetings were meant to develop preferable long-term strategies for achieving the Delta Programme goals of a safe and drought-proof Netherlands (Delta Programma, 2010). Political decision-making however, had to take place in the constitutional decision-making structures of municipalities, water boards, provinces and the state.

Initially the sense of urgency with the stakeholders was rather high, as was the number of participants. Because the Ijsselmeer region did not exist as an administrative entity in terms policy regime prior to the consultation, most public and private actors experienced the first network meetings as novel and valuable in crossing institutional boundaries. However, during the formulation of plausible strategies urgency and participation of various public and private actors gradually faded.



#### *6.5.1.3 Processes of framing*

After the Delta Committee put the Ijsselmeer region on the policy agenda as a national security issue, the national civil servants and experts from the DPIJ administrative office reframed the security issue into an 'upgrading the water system' frame, for which in view of a changing climate, 'doing nothing was not an option'. By setting the boundaries of the deliberations in form of a technical 'upgrade' of a national scaled interest, the administrative office defined the actors who were the plausible holders of relevant pieces of the puzzle: the mostly national and regional public administrators directly involved in the technical or procedural characteristics of the system. In addition, by framing the issue as a national 'system' wittingly or unwittingly the administrative office put technical experts in charge leaving less room for political elected decision-makers lacking the technical knowledge to join in solving a 'technical puzzle'. Regional political elected decision-makers struggled with reframing the technically defined 'system' issue into a regional scaled societal or political issue. Repeatedly public and private regional actors asked the DPIJ administrative office to be clear about the water level as preferred by the national government on the medium-long term, or to be clear about the decision-making procedures, allowing the societal and political actors to position themselves towards this new proposed reality. The administrative office however,

was hesitant in taking a stand about national preferences or official procedures. In line with the technical framing they focused on the fine-tuning of various plausible strategies covering a broad range of hypothetical water levels and time lines (M. J. Vink & Mulligen, 2013). Subsequently some political actors failed to see societal and political sense reflected in the process and indicated they might withdraw from the network meetings and turn to backchannel lobbying at the national political level (M. J. Vink & Mulligen, 2013).

#### *6.5.1.4 Conclusion*

Because the national civil servants became the gatekeeper and the agenda setter discussions remain technical. Although regional societal representatives and political elected decision-makers tried to reframe this into more institutional, or political meanings the framing in the discussions remained non-political. For the administrative office framing the puzzle in a non-political way sidestepped the danger of political controversy. However, the technical framing in combination with the administrative office not taking stances yielded ambiguity in national aims and corresponding ambiguity in mutual dependencies. This discouraged regional societal and political elected decision-makers from sharing their local societal and economical concerns and negotiating over these concerns in the deliberations. This lead to a flaw in attention and occasional withdrawal from the voluntary network meetings.

### *6.5.2 Deliberative governance initiative in British pluralism: The Anglian Regional Flood and Coastal Committees in the UK*

Acting on the Pitt Report in 2008, the British government introduced the Flood and Water Management Act in 2010, which gives unitary or county authorities the lead responsibility for managing local flood risks (as Lead Local Flood Authorities or LLFAs), encouraging local engagement in flood control in view of climate adaptation, investment decision-making and 'stronger partnership working' (National Audit Office, 2011) In addition, Regional Flood and Coastal Committees were established. These RFCCs govern the deliberations between the EA, and the LLFA's and other relevant actors in governing risks. Twelve RFCCs have been established across England. For reasons of geographical similarity with Dutch lowland area's we will focus only on the Anglian region in eastern England (Table 6.1). Covering more than 27000 km2, it is comprised of mainly high quality agricultural land extending across several counties. Although the driest EA region in terms of rainfall, there are particular issues surrounding flooding as most of the land is flat and low-lying, with 25% below sea level (Environment Agency, 2012). The north Norfolk and Suffolk coast is also particularly vulnerable to sea erosion while saline inundation is an ever-present threat to the Broads; a protected area of waterways popular with tourists. To compound these risks, the region is home to 6 million people and has the fastest expanding population in England and Wales (*ibid.*). The region contains three RFCCs: the Northern; Southern; and Eastern.

**Table 6.1: regional committees in the Anglian EA region.**

| Environment Agency Region | Regional Flood and Coastal Committee | Actor composition (seats) |
|---|---|---|
| Anglian | Anglian (Northern) | 1 independent chair<br>8 EA expert appointees<br>10 local authority representatives |
| | Anglian (Central) | 1 independent chair<br>6 EA expert appointees<br>8 local authority representatives |
| | Anglian (Eastern) | 1 independent chair<br>8 EA expert appointees<br>10 local authority representatives |

#### *6.5.2.1 Institutional arrangements*

Established by the Environment Agency under obligations in the 2010 Act, RFCC statutory committees provide a lead in deciding flood control programmes in their region. According to the Government (Gov.uk, 2013), RFCCs are responsible for producing plans that identify flood and coastal erosion risks, targeting investments to reduce such risks and providing a coordinating link between the EA, lead local flood authorities and other relevant actors in governing risks. The EA must consult with the RFCC on conducting its flood and coastal management functions, take into account the committee's decisions in performing these functions, obtain the permission of the committee when setting a levy and spending funds in the region. Although the majority of EA flood defence expenditure comes direct from national government, since 2011 not all schemes are centrally funded meaning the Agency can seek 'match' funding from local authorities via a Local Levy. Committees also review local authority flood risk assessments and management strategies to ensure coordination between the local and regional levels, and consistency with the national strategy. The EA still maintained overall national responsibility for managing river and coastal flooding risks in view of climate change. A key coordinating mechanism in this respect is the National Flood and Coastal Erosion Risk Management Strategy with its focus on adaptation to climate change, and at a regional level the RFCCs.

#### *6.5.2.2 Actor involvement*

While meetings are open to the public, RFCC membership and input to decision-making is restricted to local authorities and actor groups pre-determined by the Environment Agency. Committee chairs typically are independent local experts appointed by the Secretary of State for Environment (head of the environment ministry or Defra) or the Welsh Government. Committees are comprised of a mixture of conservation group actors, farmer and land owner representatives, inland flooding experts, coastal flooding experts – appointed by the EA - and councillors from local

lead local authorities in the region (Table 6.1). Actor involvement is therefore not as dominated by vested interests as in Dutch neo-corporatist approaches. That said, this approach is only relatively recent: the committees are more pluralistically 'democratic' than their previous incarnations (RFDCs) as they now provide strong input for directly elected local councillors alongside epistemic actors. This input is particularly important because, as mentioned, RFCCs raise a levy on local authorities to help fund selected priority flood management schemes.

Institutional membership type varies slightly between the three committees in the Anglian region (Table 6.1). For example, the Anglian Eastern committee is comprised of a chairman, eight Agency appointed actors, including conservationists, farmers and flooding experts, and local councils officials from the LLFAs (Essex, Norfolk and Suffolk county councils) plus Southend and Thurrock councils. Committee meetings are generally convened every three months and are relatively well attended by committee and non-committee members. Data is unavailable on how many members of the public attend the meetings, although evidence from this region suggests that they are largely absent.

#### *6.5.2.3 Processes of framing*

Framing of flood management issues by committees is partly determined by national strategic objectives, central government funding and, increasingly, local spending and flood defence priorities. A visible process of reframing occurred after the Pitt Review, with the government perceiving flood governance more in terms of localised stakeholder input to decision-making and partnership working. Although this reframing did not alter the scale of regional governance structures, as the RFCCs replaced the RFDCs, it did lead to the re-organisation of committees to include greater local authority participation. This 'partnership' frame to both funding and managing flood controls has to an extent altered local authority roles. Regional priorities are set by the National Strategy, published in 2011 but local authorities appear now to have greater influence over targeting of investments for their priority projects. Analysis suggests that local flooding concerns are being addressed in the committee decision-making. For example, in the Anglian region the EA has had to consult with the committee to a greater degree than in the past on its regional programme and spending, although the partnership approach was already evident before the institutional changes. According to the Agency (Environment Agency, 2012), it has been 'working with stakeholders to build strong working relationships to ensure a co-ordinated approach' in the region. As a result, all five LLFAs in the Anglian Eastern Region were able to complete preliminary flood risk assessments and local flood risk management strategies – the later in conjunction with other stakeholders and the public (ibid.). These documents will underpin future committee decision-making in the region. While the post-Pitt era has therefore witnessed a reframing of the floods issue towards a more 'local' understanding of the problem in regional governance structures, there is still an element of centralised agency control.

#### *6.5.2.4 Conclusion*

Deliberative processes in the RFCCs could be seen as broadly representative of a pluralist state tradition typically associated with the UK. The committees involve both state agency, agency appointed and elected local authority actors in managing flood defences, ensuring some degree of local democratic representation in decision-making alongside a legally limited role for the state. However, this form of deliberation has not always characterised flood management in England and Wales where the influence of central state actors and vested interests has been historically more prominent and certainly has strong similarities with the Dutch neo-corporatist tradition. In addition, the main implementing actor in inland and coastal flood defences is still the Environment Agency, providing an indicator of relative power in decisions taken. Nevertheless, responsibilities of the local organisations involved are set by national acts and deliberations show framings that lead to negotiation and ultimately action.

### *6.5.3 Climate adaptation regionally mainstreamed in a traditional water management policy regime of a neo-corporatist state tradition: The Netherlands, 'Dry feet 2050'*

Early 2011, the Provincial Councils of the Dutch Northern provinces Groningen and Drenthe were informed by their administrators and the geographically corresponding waterboards Noorderzijlvest and Hunze an Aa's on a follow up study of their previous five yearly regional flood safety updates. These HOWA studies focused on so called secondary or regional water barriers which concern smaller inland water systems, which are mainly rain fed. The update study was relabelled as DV2050 (Dutch for Dry Feet 2050). The policy letters formulated four direct reasons for the relabelled update. First, the HOWA studies did not deal with the long term, especially with respect to climate change and soil subsidence. Second, the Province of Groningen decided in 2005 that it wanted to strive for higher safety norms for regional water barriers to be 1:300 and 1:1000. Third, the models used in the previous studies advanced and provide water levels that differ from the older models. Fourth, the regional barriers are to be periodically tested. Following the strategic provincial environmental plan for 2009-2013 in which climate adaptation was labelled as a central goal, the problem scope of the project was clearly embedded in an climate adaptation narrative.

#### *6.5.3.1 Institutional arrangement*

Besides taking up climate change in the existing regional policy regime, the DV 2050 project differs slightly from previous HOWA studies with respect to its intentions for stakeholder participation. The start-up document states that preselected stakeholders will be involved as early as possible in order to gain acceptance for the end result and to find solutions that are 'integral' and 'innovative' (Stuurgroep Droge Voeten 2050, 2011, p. 13). The strategy is a direct response to the experiences with the societal resistance the civil servants encountered in the previous HOWA studies and succeeding policy implementation. Despite these reframings towards climate change and stakeholder

participation, the basic institutional constellation of rules, roles and competencies of the project remains very close to its predecessor, which are formalized in a the Water Act (2009) and several National Government Accords on Water (2003, 2008 and 2011). The participating governments are the same, the provinces of Groningen and Drenthe and the waterboards Noorderzijlvest and Hunze and Aa's, as well as the geographical problem scope of the project. As a matter of routine, the steering group consists of decision-makers from the involved four governments. The steering group makes political decisions and regularly involves the administrators of the provinces and water boards (D. Boezeman, et al., 2014).

#### *6.5.3.2 Actor involvement*

The project group of civil servants prepares decisions and operates with sub-projects for which the vested interests in region are invited as a matter of routine. These are the branch organization of farmers LTO, the umbrella organizations for nature and environmental groups, the organization of the municipalities and the committee on soil subsidence and energy related organisations[9]. These organisations are labelled as 'priority stakeholders'. The priority stakeholders receive the agenda of the project group meetings, may raise new agenda issues and are welcomed to comment, which they occasionally do. One sub-project leads the defining safety norms and two deal with developing adaptation policies for the water systems of the two water boards. Those sub-projects initiate studies by knowledge institutes and consultants for specific expertise or calculations.

The project group coordinates and sets the preconditions for the adaptation policies studies in consultation with the priority stakeholders. From the start onwards, the ambition in DV2050 was to intensify stakeholder interaction in this project vis-à-vis the earlier HOWA studies. The stakeholder kick-off event was well-attended, but the sense of urgency for the problem of the project was low. In part this was due to a lack of concreteness of showing what the consequences of climate change were for the water system or for stakeholders. For another part, the tradition of the state providing safety for its inhabitants in a rather neo-corporatist manner was effective and non-controversial, and accordingly the general goal and organisation of the project was non-disputed (D. Boezeman, et al., 2014).

In all phases of the project the technical and participatory trajectories are clearly separated. Contrary to the overall project group organisation where ideas and policy preferences are formulated, the technical trajectory of the sub groups is expert-dominated. In these sub-groups the different packages of policies developed in the project group are considered by assessing their hydrological, economic, environmental, cultural heritage, and agricultural effects, also in view of future climate change. The administrators then propose the technically best assessed policies to their parliaments for decision-making. Here, we observe a classical feature of Dutch neo-corporatist policy making, where experts delineate the substantial playing field in which actors may bargain (Halffman, 2009).

9 The area of concern is the largest gas mining area in the Netherlands, involving various large infrastructural works and the issue of soil subsidence due to mining.

#### *6.5.3.3 Processes of framing*

As discussed above, officially the DV 2050 project is framed as a periodic update of the water safety system in view of climate change. During the process this framing translates in various problem framings hold by various actors at various scales: 1) an update of the hydrological models is the problem, 2) the new norms as set by the province cause the problem of living up to these norms, and 3) land use is the problem. In addition the problem framings translate in institutional framings, 1) on allocation of responsibility, 2) on budgets, and 3) on how to influence decision-making. What is striking is the rather adversarial character of the interactions of the actors in the project group holding these different frames. Most project group meetings of about three hours where characterised by one or more conflicts: problems were discussed but responsibilities and budgets were often actually negotiated over or temporally set aside if deadlocks were looming. There was little change in this character during the three years we followed this project. Discussions often yielded conflict and negotiations. However, no civil servant or primary stakeholder left the process, and most meetings yielded (incremental) progress in the formation of a collective agreement on how to update the water system in view of climate change. Most interactions of conflicting frames took place as part of a policymaking routine with clear procedures and characterised by relatively clear organisational dependencies and responsibilities.

#### *6.5.3.4 Conclusion*

Although various governments and stakeholders are involved, the policy regime has a rather routinized character. Meetings and procedures are clear to actors involved and follow interaction-routines. Actor selection for participation is typically neo-corporatist in the sense that 'priority' stakeholders are invited to take part in meetings, are known by governmental actors and represent powerful organised societal interests. The initial regionally scaled problem framing is contested by other framings in a rather adversarial manner during regular meetings. However, due to clearly defined roles, responsibilities and interdependencies, frame differences yield negotiations rather than apathy or controversy (D. Boezeman, et al., 2014).



## 6.6 Comparison and Discussion

The results summarised in Table 6.2 show clear differences and similarities between the three cases. In line with Howlett (2009) different state traditions show different policy regimes, which might change over time (Benson, Jordan, Cook, et al., 2013). This might be illustrated by how the British state tradition, which we labelled pluralism, the water management policy field shows a policy regime akin to the traditional Dutch neo-corporatist tradition, where vested interests negotiate with (central) authority. Corresponding the scholarly plea for deliberative governance discussed in our introduction, and despite state traditions, the emergence of climate adaptation as a policy issue has sparked deliberative governance initiatives in both British and Dutch water management. These

**Table 6.2. Comparing deliberative governance of climate adaptation with traditional policy regimes in different state traditions**

| | **Delta Programme Ijsselmeer (Netherlands)** | **Anglian RFCC's (United Kingdom)** | **Dry feet 2050 (Netherlands)** |
|---|---|---|---|
| **State tradition** | Neo-corporatism | Pluralism | Neo-corporatism |
| **Institutional arrangements** | Ad hoc deliberative governance of a wide variety of up to 300 stakeholders coordinated by an ad hoc administrative office and steering committee. | Deliberative governance initiative institutionalised through national acts mainstreaming climate adaptation in local policy partnerships of the EA with local authorities. | Institutionalised (neo-) corporatist cooperation of civil servants. 'Priority' stakeholders closely involved through institutionalised deliberation mainstreaming climate adaptation at the administrative level. |
| **Actors involved** | 30 coordinating civil servants, 4 appointed decision-makers representing all regional political elected bodies in a DPIJ steering committee, 300 public and private stakeholders organised in a network, 100 regional decision-makers organised through 'conferences' | 1 independent appointed chair, 6-8 Environment Agency expert appointees, and 10 local authority representatives. | 20 Civil servants, 5 'priority stakeholders' regularly taking part in project group meetings, 4 decision-makers. About 40 other stakeholders are bi-annually informed. |
| **Process** | Problem framing:<br>A national strategic objective (climate proofing the Netherlands) reframed as a technical task of updating lake Ijsselmeer<br><br>Interaction patterns:<br>Various scale and problem frames existed but the state centred national technical framing remained dominant, yielding cross scale learning but ambiguity about actual implementation and apathy among regional decision-makers and stakeholders struggling with how to make sense of the national technical framing in their own interest<br><br>Dependencies: Ambiguous dependencies due to ad hoc institutionalisation, unclear routines and procedures and abstract nationally scaled technical problem framing. | Problem framing:<br>After the Pitt Review national government framed water safety as a regional climate change adaptation issue, to be taken care of regionally, with local stakeholder input for decision-making and 'partnership' working.<br><br>Interaction patterns:<br>Although the reframing did not alter the scale of regional governance structures it did lead to deliberative processes in the committees. This 'partnership' frame to both funding and managing flood controls has to an extent altered local authority roles.<br><br>Dependencies: National legislation leads to relatively clear responsibilities of, and dependencies between organisations involved. This generally leads to negotiation and decision-making in RFCC's. | Problem framing:<br>Regional flood safety maintenance, reframed as a long term challenge of increasing safety in view of a changing climate.<br><br>Interaction patterns:<br>Various scale and problem frames without one dominant framing yielded negotiations over problems, institutional arrangements, strategies and consensus. Social learning remained limited to the limited number of actors involved and remained within the institutionalised scope of the project.<br><br>Dependencies: Clear dependencies due to institutional setting and explicit frame differences,<br><br>yielding negotiation and decision-making. |

initiatives however, show different institutional arrangements, actor involvement and different frames in the deliberative processes.

Deliberative governance dealing with climate adaptation in the Netherlands is unlike the country's neo-corporatist tradition of an ad hoc and pluralist character and shows a high degree of puzzling over what is at stake, and only implicit powering strategies over positions in the policy process. The initiative shows institutionally decentred deliberations parallel to constitutional decision-making, yet not routinized or coordinated by national legislation. The large amount of public and private actors participating on a voluntary basis with no legal coordination or routines results in processes of learning among a wider array of actors but lacks negotiation over explicated frame differences. In that sense deliberative governance initiatives of climate adaptation in the Dutch neo-corporatist tradition might be expected to show ambiguous understandings of the climate change issue (Hulme, 2009), limited social cohesion and unclear division of responsibility and therefore yields apathy among participants (Pidgeon, 2012), or a situation akin to what (Darley & Latane, 1968) have labelled a 'bystander effect' in social psychology (M. Vink, Dewulf, & Termeer, forthcomming).

In line with other cross national studies (Benson, Jordan, & Smith, 2013) pluralism seems only marginally represented in the British flood protection policy regime compared to for example other pluralist state traditions like the US or Australia. Still, different form neo-corporatist Netherlands national government has taken a coordinating role through national legislation to coordinate local agency and to empower nationally set values in regionally formulated policy. This might explain why climate adaptation is less a matter of depoliticized puzzling over possibilities between a wide array of meagrely defined roles and responsibilities like in the Dutch DPIJ case, and more a matter of centralised agenda setting and legally enforced mainstreaming of national values, which leads to regional negotiations with regional authorities at a the regional RFCC level.

Although state traditions do not show a linear relation with policy regimes or deliberative governance processes (Howlett, 2009) and despite limitations of qualitative case study comparisons, our research does suggest that state traditions empirically seem to relate to the institutional arrangements allowing for deliberative governance initiatives. State traditions therefore seem to matter for how deliberative governance initiatives play out. In Dutch neo-corporatism the traditional pattern of negotiation between limited vested interests and (central) government is strong, which might be illustrated by the DV2050 case. The routinized nature of neo-corporatist arrangements with clear role expectations enable a division of tasks to effectively negotiate and decide over complex problems. However, at the same time these patterns lack new entrance of actors and ideas and therefore delimit learning. As the case of DPIJ illustrates, the introduction of ad hoc deliberative governance parallels these neo-corporatist flavoured policy regimes, which enables for a wider variety of actors and ideas but leads to ambiguous understandings of rules and responsibilities, extensive puzzling and limited action from politically elected decision-makers. This suggest that neo-corporatist state traditions with their institutionalised negotiation patterns do not necessarily enable for ad hoc deliberations as effective decision making arrangements with a wider variety of actors.

Even though the traditional water management policy regime in Britain might seem more neo-

corporatist than its pluralist state tradition would suggest, deliberative governance initiatives for climate adaptation seem to profit from a state tradition where plurality is traditionally coordinated by the state through legislation. Although actor involvement remains limited in the British case, responsibilities and dependencies are clearer due to national legislation coordinating the process. This leads to RFCC's which unlike the Dutch DPIJ are the primary decision-making bodies and have to negotiate and decide over (local) priorities in flood protection. Unlike the Dutch DPIJ case national set values are not implicitly empowered through a technical framing like an 'update task', but are explicitly mainstreamed in the local negotiations through national legislation, national funding and EA involvement. Despite methodological limitations of our study, our findings suggest that due to the national focus on legally coordinating regional roles and responsibilities pluralist traditions allow better for deliberative governance initiatives then neo-corporatist traditions, which means that in contrast to scholarly pleas deliberative governance should not be viewed as a universal approach to effective climate adaptation. Therefore we position our findings in line with Massey et al (2014) and Dupuis and Biesbroek (2013) suggesting that if specific countries are considered best practices for successful climate adaptation initiatives -such as deliberative governance- this should be done with care and not without considering existing practices and country specific traditions in policy style.

## 6.7 Conclusion

Deliberative governance is often proposed to do justice to the cross-cutting challenge of climate adaptation. However, deliberative governance does not necessarily match with existing state traditions in interest intermediations between society and the state (Wilson, 1983). To understand how deliberative governance initiatives in the emerging field of climate adaptation play out in different state traditions we conducted comparative case study research. We compared two deliberative governance initiatives for climate adaptation in the water sector in: 1) the Dutch neo-corporatist state tradition and 2) the British pluralist state tradition. To understand the differences between deliberative governance initiatives for climate adaptation with traditional water policy regimes mainstreaming climate adaptation in Dutch water management we conducted a second case study comparison between 1) the Dutch deliberative governance initiative mentioned before and 2) a traditional Dutch water management policy regime mainstreaming climate adaptation as a new challenge.

Our first research questions was: How do framing processes and actor involvement of a deliberative climate adaptation governance initiative in the Dutch neo-corporatist state tradition compare to framing processes and actor involvement of deliberative climate adaptation governance initiatives in the British pluralist state tradition? First of all, in line with Howlett's (2009) ideas on non-linearity between state traditions and policy regimes we find that climate adaptation governance in the UK shows less pluralist characteristics as might be expected in a pluralist tradition. Nevertheless, in deliberative governance initiatives dependencies are clearer compared to the Dutch deliberative

governance initiatives due to predefined responsibilities and nationally set values explicitly mainstreamed by British national legislation. British deliberative governance initiatives therefore yield framing processes that allow for negotiation and action. In the Dutch deliberative governance initiative a lack of coordination through national legislation yields unclear division of responsibilities. Due to unclear roles and a dominant technical framing set by the coordinating administrators the ad hoc deliberative governance initiative shows less explicit negotiations. Dependencies and responsibilities between national government and the relatively wide variety of regional stakeholders remain ambiguous and regional politically elected decision-makers experience difficulties in negotiating with the national administration. Together with the ambiguous understandings of what the climate issue means these unclear responsibilities and mutual dependencies result in what can defined as apathy (Pidgeon, 2012) or what socio-psychologists have labelled a bystander effect (Darley & Latane, 1968).

Our second research question was: How do framing processes and actor involvement in deliberative governance initiatives of climate adaptation compare to the framing processes and actor involvement in traditional water management policy regimes taking care of climate adaptation in Dutch neo-corporatism? We find that the deliberative governance initiative in a neo-corporatist state tradition yields more extensive puzzling and technical framing among a relatively wide variety of public and private actors compared to climate adaptation mainstreamed in typical neo-corporatist policy regimes illustrated by the DV 2050 case. Secondly, despite uncertain knowledge and ambiguous understandings associated with climate change impacts on flood management, the typical neo-corporatist policy regime of DV 2050 in the neo-corporatist tradition yields relatively clear inter-organisational routines, responsibilities, dependencies, and leads to negotiation frames and subsequent action compared to the DPIJ case. However, because of the clear procedures, preselected 'priority' stakeholders and routines of the typical neo-corporatist policy regime, the approach lacks room for learning (D. Boezeman, et al., 2014).

Despite limitations to qualitative case study comparisons these results suggest that state traditions matter in enabling for deliberative governance initiatives. Scholarly pleas for effective climate adaptation through deliberative governance initiatives should be viewed in light of country specific traditions in policy making and interest intermediation.



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# Chapter 7

## Action research in governance landscapes: Partnering with *city guides* and *gatekeepers*[10]


### Abstract

Action Research (AR) is proposed for solving organisational problems by step-wise social learning in closed organisations. In political science however, change is often conceptualised as the result of societal arenas conflicting over ideas and powers. To understand the effectiveness of AR in policy networks which puzzle and power over ideas and interests this paper couples Wittgenstein's ideas on understanding complex problems through learning via 'guides' with more conflict based notions on policy change. We describe how we teamed up with a civil servant acting as our guide in the policy network of the Dutch Delta Programme (DP). Teaming up gave us insight in actors' frame interactions at the informal fringes rather than the formal centre of the network. In addition this yielded frame reflections with our guide, which worked both ways: We gained insight in a practitioner's view on network dynamics, and by sharing reflections our self, our guide became our powerful advocate in the DP network's puzzling and powering processes. Accordingly, for effective AR in policy networks we believe partnering with a guide is not only crucial for effective puzzling over the various practitioners' frames creating the problem, but even more a matter of effective powering with practitioners frames to gain a powerful say in the collective puzzle.


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## 7.1 Introduction

For philosopher Ludwig Wittgenstein, problems were not made solvable by single theories. Instead, for in-depth understanding, one could at most be 'guided' through the various perspectives to a problem. As a guide in philosophical problems, he considered himself a rather 'bad' guide, with advantages however:

> *In teaching you philosophy I'm like a guide showing you how to find your way round London. I have to take you through the city from north to south, from east to west, from Euston to the embankment and from Piccadilly to the Marble Arch. After I have taken you many journeys through the city, in all sorts of directions, we shall have passed through any given street a number of times – each time traversing the street as part of a different journey. At the end of this you will know London; you will be able to find your way about like a Londoner. Of course, a good guide will take you through the more important streets more often than he takes you down side streets; a bad guide will do the opposite. In philosophy I'm a rather bad guide.* (Gasking & Jackson, 1967, p. 51)

Wittgenstein's plea to understand problems through the authentic view of the problem holder touches upon the plurality of societal understandings that often construct ill-structured or wicked problems (Rittel & Webber, 1972; Hisschemöller & Hoppe, 1995). Therefore, the variety of societal understandings of climate change mean that societal adaptation to climate change is often referred to as a wicked problem (Hulme, 2009; Dewulf, 2013; Vink, Boezeman, Dewulf, & Termeer, 2013). To deal with these persistent and difficult-to-solve problems, the true problem is to define the problem in coherence with the plurality of understandings, thereby corresponding with Wittgenstein's plea to understand a problem through its side-street views rather than through a single main-street view.

Accordingly, this chapter evaluates the potential of partnering with a 'bad city guide' as an action research (AR) approach to dealing with the various side-street views that complicate societal adaptation to a changing climate. We ask the following research questions: 1) how can partnering with a city guide as AR method help to gain a better understanding of the landscapes of actors, views and positions that construct the wicked policy problem of adapting to climate change; 2) how can partnering with a city guide as AR method provide policy advice that fits the problem holders' authentic understandings of the problem and its surrounding governance landscape. We address these questions because we believe that AR is currently only marginally used in scholarly analysis of governance processes (Wagenaar, 2011), and we therefore feel the need to specify the added value of deriving more credible as well as more pluralistic understandings of the wicked problems and solutions often associated with the governance of climate adaptation.

Questioning AR in a governance context goes beyond the organizational context in which AR is usually employed. We therefore build on AR viewed from the systems thinking theory discussed in chapter 2, which proposes that solving problems requires understanding the interrelatedness of actors in complex governance systems, in combination with AR viewed from constructionist theory to understand how the interrelatedness of actors may change through learning by interacting. We

apply this system-learning approach by focusing on frames as short storylines that actors share in interaction to create a common understanding (Dewulf et al., 2009). In addition, we consider these frame interactions as the intermediaries between collective processes of puzzling over ideas and the collective processes of powering over interests (Heclo 1974, Vink, Boezeman et al. 2013, Vink, Dewulf, & Termeer, 2013). To gain a better understanding of the potential of AR for scientific understanding and organization change in these processes of puzzling and powering, we studied frame reflections between policymakers and us as scientists (Checkland & Holwell, 1998; Coughlan & Coghlan, 2002). We did this in relation to the governance of adaptation to climate change (GACC) in the Dutch Delta Programme for Lake Ijssel (in Dutch Ijsselmeer) over the period 2010–2013. This chapter gives an account of how we participated in network meetings, paying special attention to our reflections with our guide in the network and the gatekeeper who gave us access to the network (Gasking & Jackson, 1967; Bache, George, & Rhodes, 1996).

Next, we elaborate on our theoretical lens in doing AR on wicked policy problems through partnering with a guide. We elaborate on the nature of wicked problems, and the role that frame reflection might have in elucidating and altering processes of puzzling and powering over them. Subsequently, we sketch our case study and how we applied the theoretical lens in our methodological approach. After that, we discuss the results in terms of scientific understanding and organizational change, and we conclude that not only frame reflection is an important tool in AR, but also partnering with Wittgenstein's bad city guide. We discuss the characteristics of this bad city guide in the scholarly tradition of boundary work (Jasanoff, 1994; Gieryn, 1995; Clark et al., 2011; Boezeman, Vink, & Leroy, 2013).

## 7.2 Action research: navigating wicked policy landscapes



As a quintessential long-term policy problem, the governance of adaptation to climate change relies on knowledge about long-term climate change impacts, which are riddled with uncertainties. In addition, this long-term character implies multiple policy cycles before impacts materialize and before the effects of adaptation measures can be evaluated. This can render policymaking over adaptation prone to controversies about the knowledge base and may amplify political conflict over long-term versus short-term interests (Lazarus, 2008; Hovi, Sprinz, & Underdal, 2009; Lempert, Scheffran, & Sprinz, 2009). Some have referred to climate change adaptation as a wicked problem that cannot be precisely formulated or solved because of the uncertain knowledge in combination with the fact that diverging problem formulations change over time (Rittel & Webber, 1972; Lazarus, 2008; Davoudi, Crawford, & Mehmood, 2009; Jordan, Huitema, van Asselt, Rayner, & Berkhout, 2010). Accordingly, the governance of adaptation to climate change might be characterized by (1) inherent uncertainties given the long-term character of this policy issue; (2) the association of many interdependent actors with their own ambitions, preferences, responsibilities, problem framings, and resources; and (3) the lack of a well-organized policy domain enhancing and monitoring long-term climate adaptation on the short-term policy agenda (Ford, Berrang-Ford, Lesnikowski,

Barrera, & Heymann, 2013; Termeer, Dewulf, & Breeman, 2013)

Although the scientific attention on GACC has been steadily growing over the last decades, this has not led nation-states to unconditionally implement climate adaptation policies. Moreover, although a lot of the literature specifically stresses the need for state intervention, most of it adopts a rather abstract view on how rules and regulations should work in GACC, instead of working towards an in-depth empirical understanding of how GACC processes take shape. Hence, a growing body of scientific knowledge on the role of policy systems may not of itself lead to in-depth understanding of, and usable knowledge for managing, the complexity of GACC processes (Repetto, 2008; Biesbroek et al., 2010; Keskitalo, 2010; Ford and Berrang-Ford, 2011; Biesbroek, Klostermann, Termeer, & Kabat, 2013; Vink, Dewulf et al. 2013).

### *7.2.1 Policymaking as an interplay of puzzling over routes and powering over destinations*

In other domains, scholars have emphasized that to understand the empirical complexity of wicked policy problems neither a technocratic view of policymaking – where the 'best' policy option can be derived from proper calculation and modelling – nor a more political perspective on policymaking – where stakeholders negotiate over their interests on the basis of rational micro-economic thinking – are applicable. An interesting way of conceptualizing policymaking about wicked problems might be what Heclo (1974), Hall (1993), and Culpepper (2002) call a process of both 'puzzling and powering,' where governance is about collective 'puzzling' over ideas and concepts to come up with plausible storylines and solutions, and at the same time about organizing enough 'power' to get things done in a plural societal context. Scholars like Stone (1989), Schön and Rein (1994), Yanow (1996), and Wagenaar (2011) define this dichotomy between puzzling over ontology and powering over normativity by introducing the concept of framing to the policymaking process. They understand policymaking as a matter of negotiating over language, and with language, in which they consider frames short storylines or metaphors, explicitly or implicitly saying something about the cause of the problematic reality, and at the same time taking a moral standpoint towards this reality implicitly pointing towards possible solutions.

Framing climate adaptation, for example in the context of the low-lying Netherlands as *a national water task*, implies that climate adaptation is primarily a matter of water management at national level. The word *task* implies that something has to be done without a lot of room for debate. A frame also excludes possible side-street views on a problem. The possibility of mitigation as a cause of, or solution to, the problem is clearly omitted, as well as the possible variety in regional needs or opportunities; and the concept of *task* does not take into account plural understandings of how important adaptation is in the first place. In the social context of policymaking, like administrative meetings, parliamentary debates, or stakeholder workshops, frames like the *water task* might interact, compete, or merge with other frames. This process can be understood as the interactive alignment of societal understandings, or what Wittgenstein calls the various side-street views on a problem.

### *7.2.2 Action research: powering to puzzle*

Following Heclo (1974), puzzling over climate change uncertainty and the collective wondering over adaptation options is clearly a process in which interactive framing plays an important role. To organize power to get climate adaptation policies implemented, interactive framing might also be important. Policy actors might strategically choose both the partners with whom they wish to interact, and the frame they employ in interacting with these partners to organize support. By framing issues in a strategic way towards (influential) stakeholders, administrators, experts or politicians, policy actors may strategically puzzle towards power. Framing climate adaptation as a national water task is more likely to fall on fertile ground at a ministry of public works responsible for executing nationally defined water tasks than in an NGO concerned with reducing CO2 emissions. This notion of governance as actors puzzling and powering closely resembles AR as a system-thinking approach in combination with a constructivist approach (Huntjens et al., Chapter 2, this book). For AR to be effective, it needs to focus on the holistic system of actors' puzzling and powering through frame interactions, and at the same time AR needs to interact in these processes for social learning to occur. If puzzling and powering are interplaying processes, this would mean that knowledge is not sovereign and that adding new perceptions to the policy puzzle by social learning might be met with scepticism because of its effect on policy coalitions and power constellations. Therefore, AR might have to organize power to get legitimate access to the governance process. This would mean that AR is first of all a matter of powering to puzzle.

In modern deliberative governance arrangements often proposed by the GACC literature (Vink, Dewulf et al., 2013), processes of puzzling and powering are less dependent on a sovereign regulating authority and more on a market-like co-production of equal players in a network. Nevertheless, government often plays an important role in guiding network governance as a gatekeeper, determining who is included and who is excluded (Bache et al., 1996). This regulation is often ad hoc and not formalized (Rhodes, 1996; Stoker, 1998; Goodwin & Grix, 2011). Accordingly, AR in GACC may be not only about creating a shared understanding in a closed organizational or governmental context, but also, and primarily, about navigating and influencing processes of sense-making in loose networks of stakeholders (Coughlan & Coghlan, 2002). In this context, legitimate access to these networks is a first step, in which the networks' gatekeepers play an important role (Bache et al., 1996; Bache, 2000; Barzilai Nahon, 2008). To be effective in powering to puzzle, action researchers may be wise to start by creating shared understanding with a gatekeeper.

In addition, AR is about holistically understanding and navigating the landscape of actors, issues, and perspectives that shape the puzzling and powering processes in the network. When successful knowledge brokering depends on in-depth knowledge of network actors' positions and perspective, a network guide (Gasking & Jackson, 1967) might become essential for knowing where, when, and how to frame issues or with whom to interact to effectively broker a frame or side-street view on a problem. When policy networks represent wicked governance issues not all guides will do the same guidance and not all gatekeepers will do the same gatekeeping. Understanding and reflecting on both the guide and gatekeeper's framings of the network will become essential for good AR.

## 7.3 Action research methods applied in the Delta Programme IJsselmeer (DPIJ)

To illustrate our ideas on effective AR in wicked GACC, we elaborate on an AR project conducted in the GACC context of the Dutch Delta, a lowland region inhabited by 10–17 million citizens depending on the definition of the Delta, which has a long history of living with sea level rise (Warner, Wester, Vink, & Dewulf, in press). However, following increasing societal concern about climate change and sea level rise in the early 2000s, a Dutch political advisory committee presented its advice on flood safety to the Dutch government in 2008 (Delta Commissie, 2008). This second Delta Committee adopted a rather wide perspective to its original task of reviewing flood safety. Together with some far-reaching recommendations on the Dutch institutional arrangements for flood protection, it set the agenda for a focus on fresh water availability during summer droughts, and pointed towards the country's largest fresh water lake and its potential capacity for buffering civic, agricultural, and industrial water demands (see figure 5.1). Although the committee's recommendation resulted in little opposition in cabinet and parliament, at the geographical scale of the lake the proposal to raise the lake's water level by 1.5 metres to provide increased storage capacity touched upon a wide array of issues, ranging from potential inundation of industrial areas and picturesque waterfront towns to the failure of water management structures (Vink, Boezeman et al., 2013; Boezeman et al., 2013). Accordingly, at lake scale, climate adaptation plans did not go unopposed.

For that reason, the Delta Programme for IJsselmeer (DPIJ), established two years later, adopted a bottom-up deliberative governance approach to operationalizing the committee's agenda in climate adaptation strategies legitimate for local governments and stakeholders. After a successful year of building a regional governance network occupied with mutual learning over the various issues and joint fact-finding for mutual understanding in the lake area, the governance process entered troubled waters. The initial sense of urgency faded among specific groups of the more than 200 public and private stakeholders. Other groups tended to take action outside the governance network by developing plans and taking positions on their own. DPIJ became a landscape of agencies, regulation, and actors around the wicked issue of rising water levels consequent to climate change. The landscape was connected through a newly established governance network, but still all actors maintained their official roles in their unique locations at different institutional settings and governmental scales. At this point, the director of the administrative office occupied with gatekeeping (Bache et al. 1996) the governance process of DPIJ, approached us as researchers in the Knowledge for Climate research programme, asking us to make sense of the governance process and to advise on possible routes towards effective and legitimate climate adaptation strategies.

### *7.3.1 Methodological approach to action research in DPIJ*

In line with our conceptual notions about a guide, gatekeeper, and frame interactions in puzzling and powering over climate adaptation, we viewed AR through the theoretical lens of systems

thinking in combination with a constructivist approach to learning. In practice, this meant that AR was about the understanding of, and interacting with, 'knowledge in action' (Coughlan & Coghlan, 2002) which went beyond a detached description of an institutional setting or controlled environment, but did not go as far as co-production of research questions with policy actors or us co-producing official policy documents. We specifically partnered with an administrator from the administrative office acting as our guide, who we initially consulted in our research design, and who in a later stage of the process co-decided with whom to interact. Initially, we conducted cooperative data inquiry with our guide, but in the later stage this was extended to frame reflection on actors' frames and corresponding behaviour, often referred to as action science as discussed in chapter 2. By conducting cooperative inquiry and action science, we aimed to select more in-depth and context-specific data, and at the same time yield analyses that fit the policy actors' understanding and could be employed in the puzzling and powering process to transform policy action (Gasking & Jackson, 1967; Riordan, 1995).

For analysis and reflection, we approached textual frames using a constructivist social linguistic approach (Wood & Kroger, 2000; Phillips & Hardy, 2002). In this approach, we focused on textual frames in terms of 1) the textual interactions taking place between agents in a network and the linguistics shaping the textual interactions between the agents, and 2) the textual frames as presentations of crystallized meaning in documents or statements produced by these agents. In this approach, we consider textual interactions as meaning-making devices often unconsciously employed by the agent (Schön & Rein, 1994; Dewulf et al., 2009; Weick, Sutcliffe, & Obstfeld, 2010), but also as tools which may be used strategically for including, excluding, emphasizing, or downplaying issues, in a broader process of puzzling and powering (Heclo, 1974; Entman, 1993; Benford and Snow, 2000).



### *7.3.2 Data collection and frame reflection*

To collect frame interactions and reflect on frame interactions in DPIJ, we used four research methods on an increasing scale of interaction in the governance process: 1) the collection of textual programme documents, 2) participatory observation, 3) semi-structured interviews, and 4) frame reflection meetings. Initially, we took a more distant observing approach akin to what Yanow and others have called *abduction* (Magnani, 2001; Yanow and Schwartz-Shea, 2006), where we iteratively switched between theory building and data collection through reading, observation, and interpretation with the occasional help of our guide. After this stage, we actively partnered with our guide for the more interactive part of the AR project.

### *7.3.3 Textual analysis of policy documents*

To understand how frame interactions in puzzling and powering over climate adaptation crystallized in policy documents, we collected the (intermediate) policy documents produced

by the administrative office after meetings or in preparation for new meetings. We collected all documents emanating from network meetings that we attended or which were used as input for discussions in network meetings.

### *7.3.4 Participatory observation*

The participatory observation consisted of observing, listening, and taking notes of frame interactions in discussions and presentations at, in total, three Ijsselmeerdays,[11] three decision-maker conferences,[12] four preparation meetings, and 10 meetings with administrative office staff.[13] If the administrative office agreed, the discussions were also recorded on a digital voice recorder. Due to political sensitivity and the closed and informal character at which the meetings were aimed, the administrative office generally did not support the idea of recording these meetings. All meetings were organized by the DPIJ administrative office, with an assisting consultancy firm taking care of the logistics and the organization process. The administrative office consisted of both national civil servants – mainly from the ministry of public works – and civil servants from county level or water board employees seconded to the administrative office. During the research, the administrative office consisted of about 20 people depending on secondment contracts ending or starting. In line with the iterative and cyclical character of AR (Coughlan & Coghlan, 2002), some of the frame analyses featured in the governance practice itself by providing ad hoc frame analysis feedback to practitioners. By asking reflective or clarifying questions, we orchestrated actor-centred analyses of frames employed. If statements or discussions remained implicit or unclear due to jargon or presumed common understanding among participants, we asked for clarification. In a later stage of the research, we took a more active approach.

### *7.3.5 Semi-structured interviews*

We conducted 21 semi-structured interviews with practitioners throughout the governance network. The interview questions centred on the events and discussions that took place in network meetings, and how actors made sense of these events and discussions. We selected the 21 interviewees on the basis of their institutional role (civil servant, decision maker, expert, private sector representative, civil society representative) and their position in the network in terms of distance to the administrative office. Using our guide's interviewee suggestions, we strove for a

11 Often these IJssel*Meer*dagen (IJssel*More*days/IJsselLakedays; *more* and *lake* are the same word, *meer*, in Dutch) were attended by 80 to 150 participants, ranging from national civil servants and regional civil servants, to interest groups or occasionally a municipality council member. All actors were invited by the DPIJ administrative office.

12 Decision-making conferences or *Lake Ijssel summits* were attended by politically responsible decision makers such as county councils, majors, alderman, and water boards, often accompanied by their direct advisors and managers. Aside from one or two representatives of the private sector and societal groups, stakeholders and administrators were not invited. These conferences were attended by 40–120 decision makers and their direct advisors/managers.

13 Administrative (preparation) meetings were attended by regional public administrators, experts, and societal stakeholders and comprised 10–30 participants. All participants where invited by the administrative office.

selection of interviewees representative of a wide variety of frames, or Wittgenstein's side-street views (Gasking & Jackson, 1967). All interviews except one were recorded by digital voice recorder with the interviewees' permission. The interviews took between 50 and 90 minutes and where conducted by one researcher in cooperation with the guide who had functioned as a liaison in contacting the interviewees. Because of the official and sometimes politically sensitive character of the DPIJ, interviewing high-level civil servants and decision makers would probably not have succeeded had we not been accompanied by our guide. Although this cooperation could suggest a bias in the wording of the questions or hesitance on the part of the interviewees about giving honest answers, the researcher who did the interviewing took great care to explain that the interview was open and without consequences. During the interviews, we continuously monitored the quality of the interview material by walking the respondents through the sequences of network events and discussions, which allowed them to vent any generalization, plain opinion, or good intention, and we avoided asking closed questions (Wagenaar, 2011, pp. 253–258). This yielded framings of sequences of events allocating meaning to specific happenings rather than constructed opinions which in retrospect self-framed the respondent. By confronting interviewees with other framings of issues, processes, or problems, we provoked reflection on their own frames or behaviour. In addition, this provided the opportunity to test our own analyses of the governance process.

### *7.3.5 Frame analyses methods*

After collecting these first frames, frame interactions, reflections, and theory testing, we started analysing. In line with our constructivist approach to frame interactions as processes of puzzling and powering in GACC, we relied on frame analysis. A common denominator among different varieties of frame analysis is the assumption that 'if we wish to understand social events, we need to look directly at those events as these unfold, not at retrospective reports or second-hand data or other forms of "self-report"' (Wood & Kroger, 2000, p. 26). Accordingly, texts are studied as parts of the concrete interaction context where they occur. This fits the textual data gathered during participatory observation at the DPIJ meetings and during frame interactions in interviews. For analyses, Wood and Kroger (2000, pp. 91–95) offer a series of general guidelines for doing textual analytic research, a number of which are worth mentioning here: (1) try to identify the meaning to and for the participants, (2) do not ignore the obvious but try to explain it, (3) concentrate on what the speaker is doing through the talk, (4) explore the consequences of slightly different versions of the text through thought experiments, (5) look carefully at how the text is structured, (6) be alert for multiple functions of discourse, (6) adopt a comparative stance, (7) question the taken-for-granted, and (8) pay attention to grammar (e.g. passive versus active formulations).

### *7.3.7 Organizing frame reflection with our city guide, gatekeeper, and other policy actors*

Having observed, read, interviewed, and conducted analysis in cooperative inquiry with our

guide, we actively participated in the governance practice in the form of action science through seven organized frame reflection sessions with the civil servants from the administrative office and some representatives of stakeholder groups. We centred the reflections on the frames in use and the related behaviour of policy actors discovered in the previous phases. The reflections were organized during two administrative preparation meetings, and five meetings with the network's gatekeeper. Presentations and subsequent reflections on our preliminary findings and theory building resulted in discussion with the participants that served as reflecting moments for the governance actors involved, served as theory testing, or yielded new data for analyses (Friedman & Rogers, 2009). Finally, in an informal ad hoc way, our guide accompanied us always during the interactions with the DPIJ governance network and yielded constant action science at co-decision level (Huntjens et al., Chapter 2, this book) in the form of frame reflection and theory testing during more than 40 lunch meetings, car-rides to interviewees, or coffee breaks.

## 7.4 Action research results

### *7.4.1 Textual analyses of frame interactions*

After the director of the DPIJ programme approached us as action researchers to reflect on the DPIJ network process, we started with detached observation of the process during the various network meetings. This yielded the preliminary frame analyses. Where the administrative office framed the issue at stake as a rather technical exercise: doing nothing isn't an option or a national water task (in Dutch wateropgave), frame interactions between the administrative staff and the network during Ijsselmeerdays and Ijsselmeer summits did not arrive at a consensus in terms of what was, or what ought to be, at stake (Vink & Mulligen, 2013; van Buuren, Vink, & Warner, in press). In preliminary policy documents however, the administrative framing prevailed. What did appear was the different scale at which actors framed the problem at stake, and whether the problem was framed as technical, procedural, or societal. The technical problem frame as presented by the administrative staff was mainly countered by regional public and private stakeholders through questioning the implicit priorities and assumptions embedded in the administrative framing: 'do these "corner points" [policy options] imply extra safety norms?,' or 'you claimed that ecology is an autonomous process, is that actually the case?' and 'What strikes me is that the fresh water demand calculated for, *is so big in relation to the current fresh water use, how did you determine this future demand?*' The counter-frames suggested that the problem presented by the administrative office was not only about the different technical scenarios of working towards the water task, but also possibly about the preferred safety norm, assumptions about future societal preferences, or different issues at stake not yet taken into account. This would suggest a need for societal debate.

Later on during the research project, discussions among administrators, societal representatives, and regional decision makers intensified (Vink & Mulligen, 2013; van Buuren et al., in press). The issue at state at the Lake Ijssel summit was framed by the administrative office as knowledge centred: 'What do you decision makers think of what we prepared and what does the Director General

from the Ministry of Public Works [who is present today] need to take to The Hague [in terms of knowledge prepared]'; this was countered by the Director General (DG) as follows: '...what do I take with me to The Hague? Yes, but we are talking about a collective programme here, the national government is also owner, there are five decisions to be made in conjunction ... we do not make decisions that stand on their own...'. The administrative office framed the issue as their ongoing work on a water task, after which the DG countered this framing by framing the issue as a matter of who is in charge. Apparently working on a water task is not all that matters to the participants. The way this mismatch between the administrative office and the DG was subsequently framed by a regional decision maker shows the tension between the scales at which the issue is being framed: *'So is this a mismatch between the administrative office and The Hague* [national government]*? Who is determining over what then? ... Maybe The Hague should take care that the other* [regional delta] *programmes adapt to DPIJ?'*

The frame interactions that we observed during the Ijsselmeerdagen and Lake Ijssel summit revealed considerable tension in problem framing and scale framing. We therefore used the analyses of these interactions as input for the interviews with the 21 selected practitioners from the governance network.

### *7.4.2 Interviews with practitioners*

At this stage, we took an active role in the governance practice by actively reflecting with practitioners on their framing during interviews. Our active role was guided by our guide. Two things appeared to be important during these frame reflections. First, the selection of the practitioners: because as outsiders our knowledge of the governance landscape was limited, without our guide we would probably have selected officials and readily accessible administrators or stakeholders. An officially appointed guide like an administrator tasked with public relations or the DPIJ director herself would, for the sake of portraying the official view, probably have selected similar interviewees. However, our guide – a normal administrator with over 20 years' experience in the region, tasked with organizing the governance process – knew all the complex relations and, hence, the various side-street views ( Gasking & Jackson, 1967) that were important for understanding the wickedness or complexity of the policy landscape. Employing our guide to select interviewees yielded a much more in-depth understanding of the governance praxis.

The second thing that appeared important was that during the interviews our guide functioned as a liaison between us as scientific outsiders and the official decision-making part of the DPIJ governance network. As part of the administrative organization of the network, our guide was in a better position to confront the interviewees with the administrative framing of the issue, and this resulted in frame reflections on the spot between the administrative framing of our guide and the various network members' framing. We as researcher could reflect on both framings on the spot if clarification was needed or if frame differences appeared persistent.

This guided form of interactions with governance practitioners yielded a wide range of all the side-

street views that made up the wicked policy landscape. What appeared was a map of all frames within the governance landscape, showing differences in the scale at which practitioners framed their issues of concern, as well as the nature of these issues. Issues were framed in national technical ways '*In the latest Delta Decisions the Delta Commissioner formulated the 1.5 metre water level rise in a very careful way to distinguish between sense and nonsense*' (director national Delta Programme), in local socio-economic ways: '*The municipality is picking the things out of DPIJ that are of concern to the municipality; the municipality does not want to suffer from this programme, we have a shipyard and we want to focus on building coasters, so we wish to expand our harbour area, and thus we are protecting our current waterfront*' (municipality alderman), in procedural ways: '*The [national] water task becomes clear now ... but what you see is that our project organization starts to hassle, which regularly creates internal conflict, because the standard project organization with the traditional preconditions, time horizons, and budgets cannot take into account these new long term issues*' (municipality administrator), or relational: '*the DPIJ administrators think they are neutral in their search for knowledge, but they aren't*' (societal organisation representative).

During the interviews, reference was often made to an increasing apathy towards the nationally and technically framed water task as presented by the administrative office, which until that time held all options open and resulted in abstract forms of consensus on technicalities as presented in meeting reports, camouflaging a lack of frame interactions on societal concerns (Vink & Mulligen, 2013; van Buuren et al., in press). During the interviews however, our guide and the other practitioners did interact in relation to frame differences due to the small closed and informal setting. This promoted frame reflections on the part not only of the interviewees, but also of our guide as a DPIJ administrator. Our guide's frame reflection appeared to be extremely valuable in organizing support for our findings at the administrative office at a later stage.

### *7.4.3 Frame reflections*

Both the frame analyses of the various DPIJ network meetings and the frame reflections during the 21 interviews yielded an analysis of frame interactions as a constant interplay of puzzling and powering over different frames or perspectives towards the issues at stake in DPIJ. One of the main conclusions that we arrived at in cooperation with our guide was that the DPIJ's administrative office largely controlled the network discussions by setting the agenda in a nationally and technically framed form. Through de-politicization, discussions became knowledge centred and procedural, and this fitted well with the task of the administrative office. In other words, the administrative office had empowered itself into a central role in the puzzling process by framing the problem as technical or procedural, omitting any more political discussion or negotiation over socio-economic or political frames that might have been conflictive at different scales. On the other hand, this resulted in various practitioners struggling with how to frame their local societal or economic concerns to fit the national technical frame. In the end, this led to the previously mentioned increasing apathy.

Analysing a governance landscape through the eyes of a guide showing the various side-street

views that determined the wicked character of the landscape was one thing. Powering our analyses into the administrative office's puzzling process was a second thing. Because the director of the office, who acted as gatekeeper to the network, tasked us to do the analyses and at the same time had a central role in setting the agenda, we reported back to her. To disseminate the analyses and provoke reflection on them, we presented the analyses to the entire administrative office, including representatives of various practitioner groups like municipalities or provinces.

After the presentation, reflections on our analyses proved helpful for theory testing and the creation of shared understanding. Being accompanied by our guide who had already shared an understanding with us (Coughlan & Coghlan, 2002) made it easier to organize support. A practitioner explained our findings framed in practitioner terms to other practitioners, thus effectively bridging the boundary between the social worlds of science and governance practice (Jasanoff, 1994; Gieryn, 1995; Clark et al., 2011; Boezeman et al., 2013). The reflection sessions are prime episodes of boundary work. In the same way, we reported back to the gatekeeper. Our analysis did not entail a comfortable message for the director of the administrative office, and therefore sharing knowledge was also about building trust and organizing support for acceptance within the social world of the administrative team. Again, our guide appeared crucial. During our final discussions with the gatekeeper, our guide explained the uncomfortable parts of the analyses in practitioner terms and, as our guide was an insider, this fitted well with the organizational understanding of the issue at stake. In addition, careful attention to the director's reflections on our analyses served to refine our analyses and created increased shared understanding.

Apart from powering our analyses into the administrative puzzle by giving presentations, reflecting, and creating a shared understanding, the analyses were disseminated throughout the organisation to a large extent through the guide. Once the AR project finished, we as action researchers left the scene and lost our influence in the governance praxis. However, our guide continued to work in the administrative office and therefore could further disseminate our joint analyses. That the gatekeeper was responsible for much of the dissemination was also illustrated by a presentation that she gave at a climate adaptation conference a couple of months after the end of the AR project. She explicitly explained how the administrative office had learned from the AR project to give room to frame differences in the governance network to overcome apathy towards climate adaptation.



## 7.5 Analysis

This case illustrates how knowledge is seldom value free in a constant praxis of frame interactions, as knowledge is constantly interpreted and employed in a process of sense making through framing. We have shown the way in which conducting effective AR has to deal with this complexity and how reflecting on the frames employed by the various practitioners created shared understanding of the governance landscape. In the case of the Dutch Delta Programme for Lake Ijssel this understanding concerned the question of an initially productive process running out of steam. By reflecting with various stakeholders on the various frames employed, we finally created a shared understanding

among stakeholders and DPIJ administrators on the differences in scales (local vs. national) and issues (technical vs. socio-economic) that had not been explicitly discussed before.

We were able to do so effectively only by constantly mapping the governance landscape and understanding the plurality of Wittgenstein's side-street views on a problem, which make a problem wicked. Instead of focusing on a linear main-street view (i.e. the official technical framing), careful mapping of the governance landscape not only led to better knowledge of the process, but also proved to be a strategic activity for organizing support by building a shared understanding of the analyses among the plurality of practitioners.

To map the governance landscape, legitimate access to the governance landscape was crucial and might have become a barrier if the network gatekeeper (Bache et al., 1996) had not legitimized access. Building strategic relations with the gatekeeper of a governance network clearly enhances access to the actual governance praxis, and this helps to gain a more in-depth understanding of the puzzling and powering process in the network. Compared to, for example, document analysis or survey research, access to the actual governance praxis enabled the co-production of a shared understanding with practitioners.

In the wicked DPIJ context with various practitioners applying various frames to the climate adaptation issue, all having specific positions in the governance processes of puzzling and powering, finding one's way around as a newcomer could have become a second barrier. Partnering with a guide in the network proved extremely effective in this task. As we have shown, a guide should not only portray the official framing but also represent what Wittgenstein calls a certain *badness*. A 'bad' guide does not show the official framing, or the dominant view to a problem, but rather her or his natural habitat, with the strong advantage of knowing the various side-street views that constitute the authentic wickedness of a problem.

Accordingly, when the governance in wicked climate adaptation policy landscapes can be conceptualized as various side-street views or frames interacting as a process of puzzling and powering over climate adaptation, AR can be seen as a matter of 'powering to puzzle.' To introduce knowledge or reflect on governance praxis, AR is primarily a matter of organizing power to be able to take part in the collective puzzling. In addition, organizing power is needed to actually influence the puzzling process; this might be done by building strategic alliances and co-producing knowledge while participating in the governance praxis. Our guide was able to select important side-street views that we would otherwise have missed. In addition, our relation with the gatekeeper and our guide guaranteed access to these views and enabled us to coproduce knowledge with these views that could be disseminated in the network afterwards by both our guide and our gatekeeper.

The 'bad' guide facilitates the straddling of the demands from different social worlds (Jasanoff, 1994; Gieryn, 1995; Clark et al., 2011; Boezeman et al., 2013). Producing knowledge that impacts climate adaption governance does not appear to be a linear thing (Biesbroek et al., 2010; Biesbroek et al., 2013; Vink, Dewulf et al. 2013). To understand the complexity of knowledge affecting governance, the wide variety of side-street views or frames in puzzling and powering over GACC should be taken

into account. The way in which our guide made available the side-street views that were crucial to our AR project seems akin to the boundary work that Boezeman et al. (2013) describe as the success of the Dutch Delta Committee. As a boundary organization, the Delta Committee went beyond the classical definition of boundary work as demarcation work. Coordination work was important for its success, i.e. the way it positioned itself towards the various side-street views that it encountered in society and carefully collected. As the chairman of the committee phrased it: 'towing the net as wide as possible through the sea,' meaning that they collected a wide variety of side-street views on the issue of climate change. It facilitated a puzzling process in which the advisory report became attuned to the different issue framings on the one hand, while simultaneously negotiating the support of a network of powerful actors for whom the committee could credibly speak (Boezeman et al., 2013)

## 7.6 Conclusion

We started this chapter on partnering with a guide in action research with the research questions: 1) How can partnering with a city guide as AR method help to gain a better understanding of the landscapes of actors, views, and positions that construct the wicked policy problem of adapting to climate change; 2) how can partnering with a city guide as AR method provide policy advice that fits the problem holders' authentic understandings of the problem and its surrounding governance landscape. Subsequently, we gave an account of how we participated in the governance network meetings with civil servants, decision makers, and stakeholders of the Lake Ijssel Delta Programme after the programme director had asked us to advise on the process running out of steam. We described how partnering with a guide provided the possibility of in-depth frame reflections with the policy actors that would not have been possible in a less interactive research approach.

Accordingly, we discovered a difference in problem frames on the scale and nature of climate adaptation between public administrators organizing the network and the regional public and private actors participating in the network. By conducting frame reflections (Schön & Rein, 1994) through interviews and by actually taking part in the governance praxis through reflective meetings with a wide variety of practitioners, we were able to create not only an in-depth understanding of Wittgenstein's side-street views of the governance process, but also a shared understanding (Riordan, 1995; Coughlan & Coghlan, 2002; Friedman & Rogers, 2009) of the different scales and problem frames that had created the increased apathy among practitioners in the governance landscape. Partnering with a guide (Gasking & Jackson, 1967) who showed us the various side-street views and the network gatekeeper (Bache et al., 1996) who provided access to the network, appeared crucial. Therefore we conclude that: (1) partnering with a guide can be an effective AR method to educe frame analysis of the various side-street views on climate adaptation and provide in-depth understandings of processes of puzzling and powering in climate adaptation governance; (2) liaising with a guide and the governance gatekeeper not only provided access to these various side-street views on governance, but also helped in the effective dissemination of the co-produced knowledge in the rest of the network; this can be seen as a special type of boundary work for effective

and legitimate AR in climate adaptation governance

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# Chapter 8

## Synthesis and conclusion

In this concluding chapter, I discuss what my findings mean in relation to the central research question with which I started this thesis. Furthermore, I reflect on its implications for the theoretical notions that informed my research questions and concrete policy implications. In section 8.1, I start by formulating my final conclusion and answering my main research question. By answering my three sub-questions in section 8.2, I elaborate more extensively on the findings that informed my final conclusion. In section 8.3, I reflect on the strengths and methodological limitations of my research, and I make suggestions on what directions the thesis implies for further research and what my thesis means for concrete governance of adaptation to climate change. In the final section, I position these reflections in a broader theoretical perspective on governing plural societies.

## 8.1 Final conclusion: navigating frames

This thesis started with the metaphor of fifteenth century navigation to capture the complexities of societal adaption to a changing climate. In thinking about adaptation to climate change, frames are mental projections comparable to the maps by which captains constructed their positon, course, and future destination. Frames guide sensemaking and acting (Bartlett 1932). In the social process of governing adaptation, I defined climate change frames as social constructions, collectively shaped through the use of language. Textual frames define what 'is' and imply a normative leap to what 'ought to be' (Schön and Rein 1994). Governing adaptation to climate change in modern societies differs, however, from the strict hierarchy in steering ships. The plurality of actors taking part in modern governance processes results in a plurality of frames. This turns governing the long-term adaptation problem into a wicked problem (Rittel and Webber 1972). I proposed to capture this governance process as the interplay of puzzling over meaning and powering over positions to get things done. Traditionally, puzzling and powering is thought to take place in institutional arrangements, which set the rules and boundaries, and define the policy actors' roles and responsibilities in the processes of puzzling and powering. How a national administrative system determines these institutional arrangements, and how societal interests are embedded in these institutional arrangements, often mirror traditions of state organisation (Dyson 1980, Howlett 2009, Painter and Peters 2010). Institutional arrangements, however, might also reflect contemporary pleas for more ad hoc, less institutionalised deliberative approaches to governing (Dryzek 2010). To capture the processes of puzzling and powering in these different institutional arrangements, I proposed to look at frame interactions in governing (Dewulf et al. 2009).

These theoretical notions informed my central research question*: In what way do frame interactions construct interplaying processes of puzzling over meaning and powering over positions in different institutional arrangements occupied with governing societal adaptation to climate change?* In answering this research question, I refer to the title of this thesis, which I explain in two ways. First of all, I conclude that frames and frame interactions navigate the interplaying processes of puzzling and powering; second, I conclude that different institutional arrangements and traditions of state organisation navigate frames and frame interaction processes differently.

### *8.1.1 How frames navigate climate adaptation*

The wide variety of frames associated with a changing climate, its potential societal impacts, and corresponding policy intentions make adaptation to climate change a wicked problem. The rise and fall in attention and controversies that emerged from 2008 onwards testify to this. To understand this wicked context, frames should be approached as more than strategic tools for communication or 'manipulation' of facts to bolster specific interests or ideologies (cf. Giddens 2009, Moser 2010, Nisbet 2009, Spence and Pidgeon 2010). Frames are the sensemaking devices that create the guideposts for societal players, administrators, and politically elected decision makers to act in a policy context. The wide variety of frames observed in the governance of climate adaptation issues crystallise around two archetypical frames: (1) technical frames, highlighting the adaptation issue as a task and the work required to complete the task; (2) political frames, highlighting the adaptation issue as social conflict and the negotiations needed to get somewhere. A third type of framing appears to be a hybrid of technical and political frames. These hybrids mostly come as process frames, highlighting the adaptation issue as a process. The combination of both archetypical frames is prone to result in frame conflicts. Nevertheless, the articulation of both archetypical frames shapes processes of puzzling over meaning, as well as processes of powering over positions and support. Correspondingly, frames shape substantial and relational outcomes of a policy process. At the micro level of policy deliberations, frame interactions form the interplay between Heclo's (1974) more general notions of policymaking as an interplay of puzzling over meaning and powering to get things done. In short: through frames and frame interactions, meaning and power are closely related in governing adaptation to climate change.

Therefore, frames *do* things in policy processes. They *navigate* individual actions through complex landscapes of actors, events, and observations. Wittingly or not, by employing frames in social interactions, actors not only define an origin, a route, and a destination, or what 'is' and 'ought to be' (Schön and Rein 1994), but intrinsically produce a process of power organisation. Wittingly or not, frames create ad hoc guideposts for inclusion and exclusion, or support and opposition, and may crystallise in coalitions that allow players to get things done. Frame interactions are a form of social learning but can never be viewed without more conflict-based notions on policymaking. These processes of puzzling and powering are not uniform however. In line with Hoppe's (2011) contribution to Heclo's ideas, my cross-case comparison showed that the number and type of participants involved in climate adaptation governance determine what frame interactions emerge, and how they lead to different outcomes. In addition, institutional arrangements form the arenas that make frame interactions more than gratuitous. Institutional arenas set the rules of what can be defined as the game of frame interactions. The rules of the game determine the character of the game and hence affect the outcomes. Interestingly, these findings seem to deviate from the dominant scholarly understanding in the climate adaptation governance literature, which makes sense of climate adaptation governance as a system of knowledge and regulation, or what I define as a *system assessment approach*. A more recent understanding in the literature does address actor-centred processes of learning, but mainly as a means to overcome power relations and institutional entrenchment as barriers to climate adaptation (Biesbroek 2014). What my thesis shows is that

neither systems of knowledge and regulation nor actor-centred deliberations alone explain climate adaptation governance. In addition to frame interactions as the puzzling and powering interplay, a second interplay might be defined between institutions and frame interactions.

### *8.1.2 Navigating the variety of frames in climate adaptation*

This brings us to the second way of answering the research question. Apart from frames doing the navigating at the level of the individual or a specific coalition, the long-term collective action problem that a changing climate poses to society requires a careful process of *navigating* the variety of frames to overcome controversy or apathy and corresponding policy deadlocks. As already mentioned, frame interactions relate to institutional arrangements. These arrangements determine the rules of the framing game, but also make the frame interactions no gratuitous social happening, determining their status in relation to official decision making. Through the interplay between institutions and frame interactions, institutional arrangements provide the means to *navigate* frame interactions. My thesis shows that different institutional arrangements yield different frame interactions and outcomes. Strongly institutionalised arrangements mainstreaming climate adaptation yield predictable frame interactions, akin to rituals with limited learning or reframing. New problems like climate change are therefore interpreted in old terms. Nevertheless, these institutionalised arrangements proved effective in navigating frame interactions through demarcation of roles and responsibilities, yielding relatively clear player dependencies and corresponding processes of frame exploration. These clear rules, roles, and frame positions easily allowed for negotiation, consensus, and policy action. Whether less institutionalised, ad hoc organised deliberative governance approaches can be effective in decision making *and* enable learning appears to depend on the existing tradition of state organisation and corresponding systems of institutionalised interest intermediation between state and society.

Although often proposed as universally effective and legitimate, deliberative governance displays a mixed picture in the Dutch neo-corporatist state tradition. The wide variety of participants and the open, thematically focused organisation enables new knowledge to be brought to the fore, but lacks decision making based on corresponding societal ambitions. Limited institutionalisation does not allocate roles and responsibilities, and this results in unclear player dependencies. In addition, the unofficial constitutional position of the deliberative arrangements, their open character, their administrative coordination, and the peculiar position of politically elected decision makers in this ad hoc network arrangement result in a dominant abstract technical framing. The dominant technical framing empowers the position of administrators and experts. In combination, however, with the unclear player dependencies and the ad hoc organisation, the technical framing produces the three preconditions of what I define after Darley and Latane (1968) as a *political bystander effect* in governance (further elaborated in section 8.2.3.4). That deliberative governance does not always yield political bystander effects is exemplified by deliberative governance in the British pluralist state tradition. The limited role of the British state in governing society (Dyson 1980, Painter and Peters 2010) traditionally allows better for deliberative arrangements to intermediate societal

interest. Correspondingly, the British state has taken to *coordinating* deliberative initiatives instead of taking the lead. In climate adaptation governance, central government plays a moderate role, but allocates roles and responsibilities to societal initiators of adaptation through national legislation. Legislation eliminates the precondition of unclear responsibilities for the political bystander effect, and therefore yields clearer player dependencies, official status for the initiative, and policy action. Deliberative governance in pluralist state traditions therefore seems more likely to yield negotiation frames and policy action than deliberative governance in neo-corporatist state traditions where the state does not legally coordinate, but navigates frame interactions by actually taking part in deliberations.

## 8.2 Synthesis of the research: answering the three research sub-questions

In this section, I take stock of the six empirical chapters to answer my sub-questions. I systematically summarise the findings and analyse these findings in view of each of the three research sub-questions. I highlight the central insights underpinning my central conclusion discussed in the previous section.

### *8.2.1 Framing adaptation to climate change*

**Research Question 1:** What frames can be observed in relation to governing societal adaptation to climate change?

#### *8.2.1.1 Climate adaptation frames in climate adaptation science*

Although the role of frames and framing in the governance of adaptation to climate change is increasingly recognised by scholars in the field of climate science, attention is still limited. As I show in chapter 3, only a few scholars have investigated the role of framing as a means of making sense of the scientifically constructed climate issue. If framing is addressed in climate adaptation studies, the concept is mostly approached as a way in which individual actors like governments, stakeholders, or media actors communicate or 'manipulate' scientific facts to maintain power positions (Giddens 2009, Moser 2010, Nisbet 2009, Spence and Pidgeon 2010). In line with Wagenaar's (2011) general notions on critical approaches to language, in climate science the question of how power organisation works and what it does remains largely an ontological discussion rather than specific empirical analysis.

Scholars in the climate adaptation field pay little attention to the role played by frames and frame interactions as actor-centred sensemaking devices in governance practices. Correspondingly, scholars themselves frame climate adaptation mainly as a knowledge challenge -*how to build and use*

*the right climate models-* or as an institutional challenge and a combination of both *-what institutions are needed to adapt to climate change*? I define this dominant framing in science as a *system assessment approach*, which emphasises -and assesses- the systemic or structural side of policymaking in light of a changing climate, but does not reflect on the role played by actor-centred framing processes in the development or absence of specific system variables. Policymaking is viewed as a matter of 'getting the institutions right', which is considered to require the right climate knowledge. Reflection on how institutions come about, and the political side to 'getting intuitions right', appears to be meagre. A minority of scholars in climate adaptation, however, frame the governance of adaptation as a political challenge, or as a dynamic process of incorporating local knowledge for better and more just policies. As discussed in chapter 3, this yields a framing which I define as the *politics of technology* approach, which emphasises the role played by models and technologies in political negotiations, and who benefits from these models in climate adaptation and who does not. Some scholars frame participation in climate adaptation rather normatively as a democratic principle. The latter approaches entail pleas for more deliberative forms of governance of adaptation.

> ***Insight**: The role of framing and frame interactions is only rarely addressed in studies on climate adaptation governance; system assessment approaches dominate in understanding governance practices instead.*

#### *8.2.1.2 Climate adaptation frames in policy statements*

If we focus on climate adaptation in official policy documents, a wide array of frames is revealed. In chapters 2, 4, 5, 6, and 7, I show how, in the case of the Netherlands, climate adaptation is mainly framed as a water issue and is often mainstreamed in existing water policies. In addition, frames vary over time, and by the official (governmental) actor doing the framing. Frames vary in terms of their geographical and administrative scale (Lieshout et al. 2011) and the timescale addressed. Issues framed in relation to specific scales do not necessarily point towards solutions addressed at the same specific scale. Issues addressed as highly relevant for future generations might point towards an urgent need for policy actions now, but might also indicate a need for postponement until better knowledge is available. Therefore, timescale frames specifically allow for pragmatically manoeuvring with the timing of solutions. Finally, frames vary in terms of the nature of the climate issue addressed: climate adaptation as a manmade issue or as an exogenous issue. How climate adaptation is framed strongly relates with the policies proposed. In the policy proposals studied, the nature of the climate issue is mostly framed as a national problem with an exogenous nature. Hence, no mitigation measures or international negotiations over $CO_2$ reductions are proposed as solutions; rather, national infrastructure to overcome sea level rise and increased precipitation is proposed instead.

As I specifically show in chapter 2, the knowledge referred to in official policy framings is not constant either. Because the variation in policy framings does not coincide with developments in climate science, this suggests that it is more than climate science that inspires policymakers. On the

other hand, in chapters 2, 5, and 6, I show that regionally scaled policy frames do employ regionally scaled climate knowledge, suggesting that knowledge is selected on the basis of policy frames or scale frames rather than on developments in global climate science. This seems in line with Mahony and Hulme (2012), suggesting that global climate models do not fit local ways of knowing.

> ***Insight:*** *Frame developments in official policy statements drive the selection of scientific knowledge, rather than the reverse.*

Although official policy frames vary over time and administrative scale, there appears to be a relation between the subsequent policy frames. As shown in chapter 2, policy frames tend to refer back to earlier policy frames and therefore can be viewed as an ongoing policy conversation through time. Through frames, governmental institutions seem to position themselves in this ongoing conversation of official policy frames. Changes in positioning relate to changes in attention in media and politics. Whether these frame differences are a matter of manipulation or political negotiation, these insights makes it difficult to maintain the *system assessment approach* to properly understand climate adaptation governance. To make sense of how these frame developments come about and relate to societal attention to climate change, I opened the black box of frames and frame interactions in the process of policymaking.

> ***Insight:*** *Within a changing context, official policy frames develop over time and can be studied as an ongoing conversation with earlier policy frames.*

#### *8.2.1.3 Climate adaptation frames in governance processes*

As specifically shown in chapters 5, 6, and 7, an even wider array of frames is revealed in the social interaction processes of governance prior to the official formulation of the policy frames. Similar to the official policy frames, frames-in-interaction vary in the nature of the issue and in the administrative scale and timescale addressed. As with official policy frames, frame changes are revealed over time. Probably the largest difference between official policy frames and the frames-in-interaction in the governance process is the nature of the climate adaptation issues addressed in the frames. Some variety in frames employed in governance processes corresponds with the man-made/exogenous dichotomy found in official policy frames. In governance processes however, most variety is found at a more applied level of framing issues. Frames vary in whether climate adaptation is addressed as a technically solvable 'task' or a political issue of competing values, priorities, and interests demanding competition and negotiation.

In most interaction contexts studied however -most vividly in the deliberative governance process of the Delta Programme for the Ijsselmeer region (DPIJ)- frames emphasise the role of technology, management, or organisation as the issues at stake. There is less reference to underlying values, interests, and consequences of what is framed as a 'water task' or a 'modernisation of the water system' for specific actors. The question of who benefits from adaptation to climate change is not, or only very implicitly, addressed in this technical framing of climate adaptation. As shown in

chapter 5, the metaphor which can be distilled from these technical frames is 'climate adaptation is a matter of getting things right', thereby questioning the knowledge, means, and procedures for achieving a 'task'. Technical frames suggest solutions related to expertise, skills, research, or better management. In that sense, climate adaptation as a technically framed issue suggests that solutions might be complicated but achievable if the right knowledge is well organised and applied in the right processes. Technical framing in climate adaptation governance processes shares similarities with the *system assessment approach* dominant in the scientific literature on climate adaptation (chapter 3). Both framings highlight knowledge and organisation as the issues at stake in climate adaptation, but do not question conflicting values, interests, and related political processes that put the issue on the policy agenda in the first place.

> ***Insight:*** *Climate adaptation is often framed as a technical task, foregrounding knowledge and technology as the main solution, not social competition or political negotiation over values or interests.*

In the studied interaction contexts, technical frames were countered, however (Bruijn 2014, Dewulf and Bouwen 2012), by what I define as political frames. Political frames are frames that imply human competition as the issue at stake in climate adaptation. This can be competition over interests, resources, values, identities, or ideas, and accordingly solutions always imply a political outcome or deal. Therefore, the implied solutions are temporal and can be reached through negotiation (Dewulf and Bouwen 2012). As I show in chapter 5, the common metaphor found in political frames is: 'climate adaptation is a matter of competing over priorities'. Correspondingly, the cases show that political decision makers often frame the climate issue as a division of costs and benefits in which they as political decision makers could win or might have to pay a price.

This thesis shows that both technical and political frames can be seen as archetypical frames in climate adaptation governance. Both are conflictive in what each frame highlights as the ontology of the issue at stake and what it suggests as the type of solution. Nevertheless, as the deliberations studied in chapter 5 also show, not all frames in deliberations are either technical or political. In addition to these archetypical frames, I define hybrid frames. Archetypical frames can evolve into hybrid frames through processes of frame incorporation (Dewulf and Bouwen 2012). Hybrid frames might concern budgetary frames (the issues is a matter of correct budgeting) or path dependency frames (the issue is a matter of what we did before). Most often however, hybrid frames concern procedural frames which highlight the procedural or institutional nature of an issue and propose procedural solutions to a problematic reality. These procedural or institutional frames do not directly highlight the climate adaptation issue as political conflict but imply political consequences. Questions framed as: '*how to incorporate this issue in our official political decision-making procedure*' or '*how to budget for enforcing dykes*' highlight a technical management task of how to incorporate something in a governance procedure, but indicate as well that prioritisation and official political decision making is important; in the end, political decision making over -for example- budgets is a political process.

*8.2.1.4 Synthesis: answering the first research question*

The first research question 'What frames can be observed in relation to governing societal adaptation to climate change?' I answer by showing a wide array of frames that are articulated in governing societal adaptation to climate change and testify to the wicked character of societal adaptation to climate change. These frames can be classified, however, in distinct categories. These categories indicate differences in making sense of the climate adaptation issue as a policy issue and point towards potential frame conflicts in governance processes. In all aspects of governance, from scientific debate to actual actor-centred frame interactions, the categories can be divided on three dimensions: the geographical and administrative scale at which the issue is addressed, the timescale at which the issue is addressed, and the nature of the issue. In table 8.1, I summarise the frame categories in terms of geographical scale and nature. Each combination may be addressed at a different timescale.

***Insight:*** *The non-politically framed system assessment approach which dominates in climate adaptation science seems to correlate with the often dominant technical framing in actual governance practices, but deviates from the adversarial frames in the societal controversy over the climate issue.*

**Table 8.1 Frame categories in governance of climate change adaptation**

| **Nature of the issue at stake** / **Scale of the issue at stake** | **Technical** *Climate change adaptation (CCA) as a task* | **Political** *CCA as conflict* | **Hybrid** *e.g. CCA as a procedural issue* |
|---|---|---|---|
| **Local** | 'Providing the right local information will improve decisions' (see chapter 5 | 'Our community will feel the pain' 'Getting compensated is the real challenge' (see chapter 5) | 'How to fit the Delta Programme in our local decision-making procedure?' (see chapter 5) |
| **National** | 'Doing nothing is not an option' 'We have to rewrite Plan Lely 'Working on the Delta' (see chapter 5) | 'Flood safety is important for the Netherlands as a whole. Hence, the solidarity principle counts' (see chapter 2) | 'Government does not take decisions which stand on their own' (see chapter 5) |
| **Global** | 'Climate adaptation should be supported [globally] by appropriate policy exchanges, financing, capacity building, and technology transfer' (see chapter 3) | 'Securitisation of adaptation to climate change does justice to the vulnerability of developing countries' (see chapter 3) | 'IPCC's hegemonic climate knowledge does not fit the policy concerns of the global South' (see chapter 3) |

### *8.2.2 Puzzling and powering through frame interactions*

**Research Question 2:** In what way does the interplay between puzzling and powering through frame interactions lead to substantial and relational policy outcomes in governing societal adaptation to climate change?

#### *8.2.2.1 Frame interactions in climate adaptation science*

The climate adaptation governance literature provides limited clues for understanding how the official policy frame developments discussed in the previous section come about. The role of frame interactions is only rarely addressed in relation to knowledge organisation and power organisation in governance, let alone as a possible link between the two. Some literature addresses the politics that comes with models and technology, but very few studies address the more dynamic forms of knowledge and power, like learning, negotiating, and positioning. As discussed in my introductory chapter and chapter 3, other fields of study do allow for more dynamic understandings of policymaking, especially by defining policymaking as interplaying processes of puzzling over meaning and powering over positions (Hall 1993, Heclo 1974, Hoppe 2011). In combination with scholars highlighting the role of framing and frame interactions as sensemaking devices (Dewulf 2013, Hulme 2009), this inspired my research question of how frame interactions could shape the puzzling and powering interplay in governance of adaptation to climate change. If we focus on actual governance, at first sight the rise and fall in societal attention on the climate issue, as well as the political configuration in government, seem to relate with the developments in official policy framing. Official policy frames therefore seem to be a result of a puzzling process over what is at stake, as well as a result of relational positioning processes, or powering to get things done in a broader context. Especially the long-term timescales which are differently employed in the succeeding policy frames point towards the discursive room which these timescales provide for smart positioning of policy frames in the context of societal developments such as emerging controversy.

#### *8.2.2.2 How frame interactions shape a policy puzzle and alter power positions*

If official policy frames are a result of changing societal and political circumstances, this would mean that frames are more than mere representations of what is at stake. If frames are more than mere representations, this could indicate that wittingly or not frames are employed to anticipate circumstances and therefore steer policy processes (Alvesson and Kärreman 2000, Steen 2009, Wagenaar 2011). By zooming in on social interaction processes in governance, this thesis opened the black box of how official policy frames come about. In case of the Delta committee discussed in chapter 4, strategically framing climate knowledge in relation to a Dutch flood safety issue enabled the committee to position abstract climate knowledge in a broader debate about the future of the Netherlands. In Heclo's (1974) terms, this can be understood as framing processes being puzzling devices to organise power to get things done. Puzzling over what climate knowledge meant and

what the existing societal frames were on this issue not only enabled the committee to do proper boundary work internally, but also created the basis for successful political negotiations afterwards. Or as the chairman of the committee phrased it: 'towing the net as wide as possible through the sea' enabled the committee to harvest a wide array of societal understandings which could be used to strategically position the committee's policy framing in this broader context. The relatively smooth decision-making processes that followed in Cabinet and Parliament testify to this.

The other cases presented in chapters 5, 6, and 7 indicate more precisely how the actor-centred frame interactions in actual governance processes work as sensemaking devices that shape Heclo's (1974) puzzling and powering interplay. By excluding, including, emphasising, and downplaying issues wittingly or not actors gave meaning to the climate adaptation issue. If different actors articulated different frames in social interaction, this yielded different meanings and processes of relational positioning 'on the spot'. Through frame incorporation, frame avoidance, or frame exploration and negotiation (Dewulf and Bouwen 2012), actors created shared or opposing meaning with specific actors. By creating this meaning, actors repositioned themselves towards one another in a collective process. Actors were able to create dominant understandings in the governance process, or defined shared interests with specific actors or coalitions. Different problem frames implied different solutions, and different types of problem owners and problem solvers. At certain points in time, coordinating players selected (dominant) frames which materialised in official policy outcomes. These materialised outcomes not only represented crystallised meaning but also crystallised relational positions. Hence, frame interactions shaped shared, opposing, or common meanings which affected both substantial and relational outcomes of the governance processes. Accordingly, the thesis shows that the question of who participates in the puzzling and powering process plays a role in the framing processes and substantial outcomes (Hoppe 2011). What the thesis adds to Hoppe's understanding is that the framing processes bring different actors to the fore as relevant, and accordingly also alter relational outcomes in the governance process.

> ***Insight:*** *Frame interactions shape both substantial and relational outcomes of the governance process, and therefore represent a puzzling and powering interplay.*



#### *8.2.2.3 Powering with technical frames, puzzling with political frames*

In the deliberative governance case described in chapter 5, administrators tend to frame issues technically and deal with frame conflicts by either frame disconnection or frame incorporation (Dewulf and Bouwen 2012). In combination with the relatively large number of administrators in the studied interaction contexts, frame incorporation or frame avoidance of different -often more political- frames made the nationally scaled technical framing dominant and self-referential. In line with that, deliberations generally had a tame character without signs of conflict. Apart from the substantial outcomes, this technical framing implied that experts and administrators were the assigned players to solve a technical problem, and correspondingly reinforced their central role. In line with Torfing (2009), this shows that making sense of issues not only implies a puzzle of what

is at stake but simultaneously brings specific roles and identities to the fore; in this case, experts and administrators. Counterintuitively, technical framing therefore also implies Heclo's (1974) powering. In the same chapter, I show how archetypical political frames suggest negotiations and related processes of powering to get things done, but also have implications for who is perceived to be problem owner and who is the logical player to be in charge of solving the problem. Political decision makers, for example, framed the studied deliberative governance process as too technical, too focused on national issues, or searched for players with whom to share political frames in order to negotiate over clear standpoints and concrete plans. The Dry Feet 2050 case discussed in chapter 6 shows how adversarial frame interactions over budgets entailed a complex puzzle over responsibilities in a complex water system. Counterintuitively, political framing is therefore also a matter of puzzling (Heclo 1974) over what is at stake and who is supposed to play what role.

> ***Insight:*** *Employing technical frames involves powering, employing political frames involves puzzling.*

What this adds to the climate adaptation literature is that framing is not only a matter of social learning or a Habermasian dialogue over the best policy options (cf. Collins and Ison 2009, Pelling et al. 2008). In addition however, the thesis shows that framing is not a matter of purely manipulating facts or a linguistic cover-up of power play either (cf. Giddens 2009, Moser 2010, Nisbet 2009, Spence and Pidgeon 2010). This thesis shows that meaning and power are closely related through the manifestation of frames and frame interactions. When meaning is changed in governance, this indissolubly implies a change in relational positions, and vice versa.

#### *8.2.2.4 Applying knowledge in governance: powering to puzzle*

The aforementioned puzzling and powering interplay through frame interactions suggests that, in specific cases, typical boundary work could be better understood through this approach. As I already indicated for the boundary work that took place in the second Delta Committee (chapter 4), epistemologically distant climate knowledge was applied in policy through processes of positioning. By strategically framing the knowledge in relation to the explored societal frames, the committee associated with, and dissociated from, specific (powerful) players in society and organised for itself and its knowledge a powerful position in the relevant decision-making arena. This seems akin to Jasanoff's co-production of knowledge and social order, or power (Jasanoff 2004). Similarly, the action research project discussed in chapter 7 shows how applying knowledge in governance was not a classical Habermasian process of communicative rationality. Both access to the policy process and the application of the knowledge had to be organised by strategically positioning the involved boundary workers, exploring the frames in the governance landscape, and framing the knowledge in relation to the explored landscape. Only then was the knowledge disseminated through the governance network, and it changed the social order within the network. In line with my findings discussed above, this means that successfully applying knowledge through boundary work requires more than the system assessment approach suggests; it also involves the positioning of knowledge;

or is above all a matter of powering to puzzle.

***Insight:*** *Making sense of knowledge for governance is essentially a process of powering to puzzle.*

#### *8.2.2.5 Synthesis: answering the second research question*

I started this section with the question: In what way does the interplay between puzzling and powering through frame interactions lead to substantial and relational policy outcomes in governing societal adaptation to climate change? The first thing I can conclude is that all cases show processes of how changes in meaning or the articulation of meaning through frames and frame interactions yield different substantial policy outcomes as well as different relational outcomes. Through frame incorporation, frame avoidance, or frame exploration and negotiation (Dewulf and Bouwen 2012), actors navigate counter frames and create dominant understandings of what the problem is and what the shared interests or coalitions are. These frames crystallise in substantial policy outcomes and corresponding relational outcomes. Therefore I conclude that framing and especially frame interactions shape Heclo's (1974) puzzling and powering interplay. Zooming in on actual frame interactions revealed that, in line with Hoppe's (2011) contributions to Heclo (1974), actors' participation alters the frame configurations and therefore alters substantial outcomes. Hence, actor positions determine outcomes through frames. What my thesis adds to this understanding of the process of puzzling and powering is how the development of frames in governance processes brings actors to the fore as 'relevant' at the expense of other actors' relevance in the process. In addition, through framing, actors reinforce their position in line with their institutional role. Hence, frames might become self-referential with institutional positions.

### *8.2.3 Frame interactions in institutional contexts: rethinking deliberative governance proposals in view of state traditions*

**Research Question 3:** How do different institutional arrangements influence processes and outcomes of puzzling and powering through frame interactions in governing societal adaptation to climate change?

#### *8.2.3.1 Institutional arrangements affecting a 'framing game'*

I chose to investigated frames and frame interactions in relation to four different institutional arrangements. As preluded in my introduction in chapter 1, I define these institutional arrangements as the rules, regulations, and routines that that allow and guide social interactions in policy processes (North 1990, Mahoney and Thelen 2010). Two institutional arrangements concerned traditional institutionalised approaches which mirror the Dutch neo-corporatist state tradition (chapters 4 and 6 and Boezeman et al 2014). One arrangement discussed in chapters 5 and 6 concerns a deliberative governance initiative (Dryzek 2010), which corresponds with the pleas for deliberative approaches

in climate adaptation science, but deviates from the traditional neo-corporatist state tradition. The fourth arrangement discussed in chapter 6 concerns a similar deliberative approach in the UK, which to a much larger extent corresponds with the country-specific state tradition labelled pluralist (Dyson 1980, Painter and Peters 2010). Focusing on how frames and frame interactions as processes of puzzling and powering play out in these different institutional arrangements, I distinguished some clear differences. These four cases confirm the theoretical notions in policy sciences and show how institutional arrangements create the arenas for social interactions. I show how institutional arrangements set the rules of what I define as a *framing game* for policy purposes. In addition, these arrangements determine the official meaning of these interaction processes and their outcomes for policy purpose. How these institutions affect the frame interactions differs per arrangement and tradition of state organisation. These findings nuance the climate adaptation literature by showing that a system assessment approach or universally proposed participation is both too systemic and above all too generalised to elucidate actual climate adaptation governance.

***Insight**: Different institutional arrangements show different frame interactions and outcomes.*

#### *8.2.3.2 Frame interactions in neo-corporatist arrangements*

The Delta Committee (chapter 4) and the typical neo-corporatist Dry Feet 2050 arrangement (chapter 6, Boezeman et al. 2014) both represent clear institutionally determined governance arenas. These institutional arrangements determined who was on board the interaction processes and who was not. This demarcation of the arena clearly influenced the frame interactions; this is in line with Hoppe's findings about how actor participation determines what frames are articulated (Hoppe 2011). In addition, the institutional arenas clearly set the rules of a framing game, and officially positioned the process in relation to constitutionally determined political decision making. As an official political advisory committee, the Delta Committee shows a clear constitutionally defined position in combination with a neo-corporatist-flavoured internal organisation of nine representatives from different societal worlds (chapter 4). The representatives did not compete over expertise but negotiated over what societal interests were at stake. In terms of Hisschemöller and Hoppe (1995) and Halffman and Hoppe (2005), the ill-structured problem of climate adaptation was structured through a division of labour over knowledge, which allowed for structured negotiating over values. In terms of frame interactions, the strongly institutionalised arrangement set boundaries and determined roles which yielded frame exploration, negotiation, and what Culpepper has defined as 'pacting' (Culpepper 2002). Similarly, frame interactions in the Dry Feet 2050 programme are characterised as adversarial. Adversarial interaction patterns correspond with actors explicitly exploring frame differences, positioning, and negotiating (Dewulf and Bouwen 2012). Limited reframing or learning was observed however. Frame interactions seemed to reflect routines and fit a tradition in standpoints. In both cases, frame interactions interrelate with institutional arrangements: the arrangement prevented actors from exiting the process, and the neo-corporatist-flavoured organisation of the process allowed for negotiation and pacting (Culpepper 2002) and yielded a relatively strong and enduring social cohesion among the limited

number of representatives. Similar to the internal processes of the Delta Committee, the Dry Feet 2050 case shows problem structuration through: (1) the organisation of strategic demarcation of roles, responsibilities, and participation; (2) the search for consensus on the knowledge provided, and negotiation about societal values (Boezeman et al. 2014, Halffman 2009, Halffman and Hoppe 2005). The learning and reframing that, in contrast to the Dry Feet 2050 case, did take place in the Committee might be explained by the goal to develop relevant knowledge which was institutionalised in the Committee's official assignment. Hence, the Committee's official task was not to develop concrete policy proposals, but to develop state-of-the-art knowledge, which it applied in rather general policy advices.

> ***Insight:*** *Frame interactions in institutional arrangements that mirror neo- corporatism yield negotiation and action, but may lead to limited learning.*

#### *8.2.3.3 Frame interactions in deliberative governance*

As discussed in the previous section, the DPIJ displays a different pattern in frame interactions compared to the neo-corporatist-flavoured arrangements discussed above. Accordingly, the programme yielded different frame interactions, and substantial and relational outcomes. The dominant technical framing in the deliberations reconfirmed the central role of administrators and experts in a policymaking context, but yielded little negotiation over ambitions or interests. Different from the constitutionally defined decision-making processes and corresponding institution-centred processes discussed in the previous section, the DPIJ deliberative governance process takes place on an ad hoc, voluntary basis. Process outcomes are not legally binding, roles and responsibilities are only meagrely defined, and the wide array of individual participants may easily exit the process if outcomes do not suit them. The coordinating administrative office, however, is officially tasked by national government to develop 'broad-based' advice on how to deal with this wicked problem of adapting to climate change; this implies keeping all participants on board and maintaining legitimacy and authority among the regional participants. Framing the climate adaptation problem as a political ambition to provide farmers with freshwater in dry summers, or framing the issue as a problem of dividing costs and benefits over all participants, would risk politicisation. In the ad hoc open institutional arrangement, politicisation could yield a process where regional players who faced outcomes negative to them or marginalisation in terms of support might have exited the governance process to search for other more supportive arrangements. The cases indicate that players searched for other, more institutionalised arenas -such as Parliament- to win powerful support and reach their goal. Problem structuration through the deliberative governance process would have to be limited to a (minority) coalition sharing similar understandings and would obviously decrease the legitimacy of the deliberative governance process vis-à-vis both national government and the rest of the regional players. The explicit goal of developing broad-based advice made legitimacy to both national and regional players essential for the success of the DPIJ. Therefore, the dominant depoliticised framing as done by the coordinating administrators might have become an understandable strategy for keeping all participants on board. Legitimacy was maintained vis-à-vis

both national government and regional players. Contrary to the neo-corporatist cases however, this non-political framing reconfirmed the role of the administrators and experts, yielded an array of novel ideas, but did not lead to political negotiations or to Culpepper's (2002) pacting process.

> ***Insight:*** *Frame interactions in Dutch deliberative governance, which does not mirror its neo-corporatist state tradition, yield a dominant depoliticised framing, extensive learning, but limited negotiation.*

#### *8.2.3.4 Political bystander effects in deliberative governance: why state traditions matter*

The dominant non-political framing and the absence of pacting processes might be explained further by a specific effect of the deliberative governance arrangement on politically elected decision makers taking part in the arrangement. In line with what van Eeten (2001) labels as the peculiar position of politicians in deliberative democracy, politically elected decision makers appear hesitant to take stances and negotiate over ambiguously understood technical framings in deliberative governance. The effect is striking in relation to the other institution-centred governance processes which do lead political decision makers to negotiate. Darley and Latane (1968) describe a comparable process in social psychology, their bystander effect, among players who hesitate to take action in the event of an emergency. Darley and Latane define three preconditions for a bystander effect: 1) diffusion of responsibility, 2) ambiguous understandings, and 3) limited cohesiveness among players. If I translate these preconditions to the DPIJ case, clear similarities can observed with the governance characteristics: 1) no clear rules and responsibilities, 2) abstract, ambiguously understood technical framings of what is at stake, 3) a novel arrangement with no routinised interaction patterns among the players involved, and unclear player dependencies. The politically elected decision makers in particular, who employed locally scaled political framings and searched for clear player dependencies, seem to be vulnerable to a similar kind of bystander effect in the context of deliberative governance. Therefore, my thesis indicates that a semi-open, ad hoc deliberative governance arrangement may lead to a dominance of technical frames. Technical frames empower administrators, add to Darley and Latane's (1968) preconditions, and, together with undefined rules and responsibilities and limited social cohesion in deliberative governance, may lead to what I define as a *political bystander effect* in governance.

> ***Insight:*** *Deliberative governance initiatives may lead to political bystander effects among decision makers.*

In chapter 6, I show that deliberative governance arrangements do not necessarily lead to this kind of political bystander effect. In the UK, similar deliberative governance cases do not lead to the technical frame dominance and do yield negotiation and pacting. This can be explained by zooming in on the traditions of state organisation in both countries. In Dutch water management, national government usually follows the neo-corporatist tradition by taking the lead in an institutionalised cooperation with a limited number of traditionally defined, organised societal interests. In the UK however, national government has a brief tradition in water management. Before the twentieth

century, water management was primarily taken care of by individual private landowners (Cook 1998). Water management in the UK mirrors a more pluralist tradition in state organisation. In line with institutionalised traditions, Dutch water management does not automatically allow for ad hoc private player involvement in official decision making. Private player involvement traditionally happens through a limited number of *organised* interests. In the UK, national government does not necessarily take the lead, but coordinates societal initiatives through national legislation. Correspondingly, the UK mainstreamed climate adaptation in regional policy initiatives through a national climate act, while leaving concrete policymaking initiatives to a variety of public and private players which to a certain extent might legally compete for policymaking power. If the goal of deliberative governance is concrete decision making, my thesis indicates that state traditions matter. State traditions specifically appear to matter for how deliberative processes play out and whether they can live up to what I define in chapter 3 as the promises often articulated in scholarly pleas for more deliberative governance in adaptation to climate change. This conclusion is in line with the findings of a recent study of the Dutch Council for Societal Development (RMO 2013), which stresses the need for more legal coordination mechanisms if government intends to take a more moderate role in governing public issues.

> ***Insight:*** *Deliberative governance initiatives evolve differently in different state traditions: Through more extensive national legislation, the pluralist state tradition appears to allow better for processes of deliberative governance that are little institutionalised.*

#### *8.2.3.5 Applying knowledge in governance: following context-specific rules of the game*

In line with my conclusions on the role of institutional arrangements for frame interactions, chapter 7, Boezeman et al. (2015), and Boezeman et al. (2014) show that different institutional arrangements also matter for how knowledge can be applied in governance. In chapter 7, I show how the array of unorganised understandings in deliberative governance pose a complex landscape of side-street views, or frames, to the policy adviser, which requires strategic processes of 1) garnering an array of frames from the landscape, 2) positioning knowledge towards these frames, and 3) strategic partnering with what I define after Wittgenstein as *guides* and *gatekeepers* in the governance process (Gasking and Jackson 1967: 51). By showing the role of a guide and gatekeeper as strategic partners in applying knowledge, I indicate that dealing with the problem requires both learning and the organisation of power to ensure that knowledge is applied in the deliberative processes. I show that strategic frame reflection can function as the interplay between both and results in dissemination of knowledge in the network.

In the case of Dry Feet 2050 (Boezeman et al. 2015, Boezeman et al. 2014), the process of applying knowledge in governance had a rather different character, which was much more in line with the neo-corporatist arrangement of the policy process. Knowledge was provided by knowledge institutes that had legitimacy in the eyes of the limited number of governments and organised interests at stake. Mutual agreement on the authority of the knowledge providers was important for

applying knowledge, and this was very achievable because of the limited number of players involved. Accordingly, authorised knowledge institutes were able to set the boundaries of what was possible in terms of policies. In the end however, knowledge had to fit the institutionalised negotiation processes discussed above. Therefore, knowledge generally was selectively *instrumentalised* by the policy actors to reach their goal, as was the governance process by the knowledge institutes to maintain their expert role.

> ***Insight:*** *Different institutional arrangements require different approaches to applying knowledge in the governance of adaptation to climate change.*

In line with Jasanoff and others, both cases suggest that applying knowledge requires more than just translating knowledge into policy relevant answers, as might be suggested by the system assessment approach dominant in the climate adaptation literature. The application of knowledge requires a precise process of puzzling over what is at stake, and this has to interplay with a simultaneous process of powering for support. Different institutional arrangements, however, demand different organisation of the puzzling and powering interplay in boundary work. In the case of a typical neo-corporatist governance arrangement with a clearly demarcated science–policy interface, authority and consensus among all actors appear essential (Boezeman et al. 2014, Halffman and Hoppe 2005, Jasanoff 2004), whereas, in a deliberative governance process, scanning the wide variety of frames in relation to a process of strategic positioning appears essential (chapter 7). Interestingly, both processes can be observed in the successful application of climate knowledge for governance by the Delta Committee discussed in chapter 4. Internally, the committee acted as a typical neo-corporatist arrangement, whereas, to present its advice to society, the committee had to act by strategically articulating societal frames and positioning knowledge in relation to powerful societal players. This matches with the hybrid character of a political advisory committee, which operates in the neo-corporatist-flavoured water management tradition, with an ad hoc defined advisory role vis-à-vis government and society as a whole.

#### *8.2.3.6 Synthesis: answering the third research question*

The final research question concerned how different institutional arrangements influence the processes and outcomes of puzzling and powering through frame interactions in the governance of adaptation to climate change. By setting the rules of, and determining the roles in, what I define as a framing game, institutions appear to have an effect on frame interactions. Institutions affect processes of puzzling and powering. More precisely, institutional arrangements create the arena which makes frame interactions possible, give specific meaning to the frame interactions, and affect the character of frame interactions. Institutional arrangements constrain frame interactions, thereby making interactions to a certain extent predictable but effective in pacting (Culpepper 2002). I see this reflected in the institutional arrangements that mirror a neo-corporatist state tradition. Less institutionalised ad hoc initiated arrangements in the neo-corporatist state tradition show extensive learning but result in limited negotiation or pacting. The limited institutionalisation and

**Table 8.2 Comparison of institutional arrangements, state traditions, frame interactions, and outcomes**

| | **Second Delta Committee (Netherlands)** | **Dry Feet 2050 (Netherlands)** | **Delta Programme Ijsselmeer (DPIJ) (Netherlands)** | **Anglian Regional Flood and Coastal Committees (RFCCs) (United Kingdom)** |
|---|---|---|---|---|
| **State tradition** | Neo-corporatism | Neo-corporatism | Neo-corporatism | Pluralism |
| **Institutional arrangements** | Institutionalised ad hoc cooperation mirroring neo-corporatism through the incorporation of specific societal representation and scientific disciplines<br>Informal deliberation with external actors in science, administration, politics, and society | Institutionalised cooperation closely mirroring neo-corporatism through administratively coordinated, though routinised, incorporation of traditionally determined organised interests | Little institutionalised, administratively coordinated ad hoc deliberative governance, deviating from the neo-corporatist tradition with its wide variety of individual actors involved from administration, society, and politics | Deliberative governance mirrors a pluralist state tradition. Societal actors and representatives can be elected in an RFCC without national government taking the lead, but coordinated through national legislation instead |
| **Framing processes and outcomes** | Internal: frame exploration, negotiation, and consensus coordinated by committee chairman<br>External: exploration of societal frames and strategic positioning of the committee's advice in relation to the societal frames<br>Outcomes: authoritative advice proposing radical measures smoothly accepted by government and parliament | Administratively coordinated frame exploration, adversarial though routinised negotiation processes and consensus<br>Outcomes: authoritative policy advice proposing incremental change smoothly accepted by regional political representation | Administratively coordinated frame incorporation or frame avoidance leading to a dominance of abstract technical frames, empowerment of administrators, and a political bystander effect among political decision makers<br>Outcomes: new knowledge and innovative ideas, though incremental policy change and limited political action | Legally coordinated deliberations yield exploration and negotiation between the committees' locally scaled frames and the Environmental Agency's nationally scaled frames.<br>Outcomes: consensus on priorities leads to funding and implementation |

the ad hoc organisation yield unclear rules and responsibilities, ambiguously understood technically framed problem definitions, and unclear player dependencies. These characteristics match the three preconditions of Darley and Latane's (1968) bystander effect in social psychology, and point towards my concept of a political bystander effect in governance. The deliberative governance case in the pluralist state tradition of the UK shows that a political bystander effect might not occur in

governance when rules and responsibilities are coordinated through national legislation. Contrary to what the climate adaptation literature often suggests, it is not only institutions therefore that seem to determine climate adaptation, neither are deliberative processes more effective or legitimate in their outcomes. How institutional arrangements and state traditions relate to frame interactions and outcomes in the cases studied is presented in table 8.2.

## 8.3 Reflections on the research findings

In this section, I reflect on the strengths and methodological limitations of my research. Furthermore, I discuss what my conclusions could imply for further research and what my conclusions mean for concrete governance of adaptation to climate change.

### *8.3.1 Reflecting in hindsight: strengths and limitations of the research*

On the basis of my research approach and research design, I was able to highlight case-specific policy deliberations, frame interactions, and their outcomes in different institutional arrangements. Conceptual choices determined what conclusions I was able to draw from my empirical findings. My pragmatic approach to framing as discussed in chapter 1 (Alvesson and Kärreman 2000) did not allow for critical reflections and conclusions about the meaning of the climate adaptation policy discourse as a cover-up of hidden societal power play or ideological strife. In line with Wagenaar's (2011) notions on critical approaches to discourse, my pragmatic approach to frame interactions does not involve extensive elaboration on the ontology behind the use of language. Instead, the research elaborates on the pragmatic side of textual frames and what they do in policy processes. My conceptual choices enabled me to draw conclusions about frames, frame developments, frame interactions, related institutional arrangements, and how different configurations of these ingredients in governance yield different processes of puzzling, powering, and related outcomes. Also, in terms of Biesbroek's (2014) approaches to studying climate adaptation governance, I was able to follow the pragmatist approach. I acknowledged the political dilemmas in the governance of adaptation, but instead of trying to solve the adaptation problem or simply judging the politics involved, I tried to understand how these dilemmas might have occurred in a wider process of constructing meaning and power through frame interactions.

Choosing case study research to assess social interaction in governance allowed for an assessment of complex nonlinear interaction processes, but yielded context-specific findings (Flyvbjerg 2006, Thomas 2011). By classifying context variability in terms of institutional characteristics however, I was able to go beyond case-specific findings and compare various cases and draw conclusions about how context characteristics related to interaction patterns. Nevertheless, case study-based research still does not allow for general conclusions which explain governance in general. At most, the research adds to an understanding of how the concepts I studied form the ingredients of governance processes and interact differently in different contexts. In relation to context variability, one of

the most important limitations is probably the administrative and geographical bias in the case selection. Case studies are limited to national and sub-national European administrative contexts, meaning that my results can only be applied to contexts outside European nation states with great care.

From its approach, design, and method, the thesis shows how frames, scientific knowledge, processes of puzzling and powering, institutional arrangements, and traditions of state organisation form the ingredients of governance processes, which interact and determine governance outcomes. Nevertheless, the thesis makes no suggestions about how these ingredients point towards hidden political agendas; nor does the thesis yield general rules or explanations which can be applied to explain any other governance context. In that sense, the metaphor of well-informed football analysis might apply to studying governance. Even the best analysis of a football match does not yield general laws for winning the World Cup. Instead, the analysis adds to our understanding of what happens in these matches and how the rules of the game, the organisation of the parties involved, the actors at play, and the interaction patterns during the matches make the matches' outcomes logical. Longitudinal analysis of these patterns will strengthen our understanding of that specific logic; however, the analysis will probably never yield a silver bullet for winning the World Cup. Similarly, my thesis at most sheds light on where the teams, players, and the -governance- game as a whole are heading, and this might inform reflections on the desirability of that course.

### *8.3.2 Reflecting ahead: Implications for further research: Towards understanding depoliticisation, self-reinforcing frames, and political bystander effects*

On the basis of my thesis' findings, I reflect on three empirical observations that could inspire further research. Finally, I discuss two methodological observations which might require additional scholarly attention.

#### *8.3.2.1 Technical frames becoming self-reinforcing*

In chapter 5, the thesis describes how technical frames become dominant and self-referential in deliberative governance. Theoretically, this might seem odd because of the wicked nature of climate adaptation. I showed that this self-referentiality can be understood as the result of the institutional arrangement. The open ad hoc deliberative governance arrangement positions non-political administrators in the role of coordinators and gatekeepers, which in combination with a nationally articulated need to maintain legitimacy among all players results in a dominance of non-political frames. These technical frames suggest coordinators and experts as the problem solvers, and hence refer back to the role of the administrators. Noodegraaf-Eelens et al. (2012) describe a similar, though more articulated, process of self-reinforcing frames in relation to risk-governance where governments often frame safety as a manageable issue, thereby creating societal expectations and suggesting 'more' or 'better' management as the solution in the event of an unforeseen emergency.

The dominant technical framing leaves no discursive room for reflecting on the uncertainty and the political trade-offs of that 'better' management.

Similarly, technical problem frames as dominantly employed by the administrative office in the DPIJ case suggest a tame problem which fits technical management solutions. The variety of other frames less dominantly articulated in the DPIJ network indicates, however, that the DPIJ case resembled a rather wicked problem. Framing wicked problems as technical or 'tame' problems suggests a technical solution or 'fit', which seems hard to live up to because of the large potential for frame conflicts. Correspondingly, a dominant technical framing might lead to propositions for 'more' and 'better' technical 'fit', once the proposed solution actually yields negative political trade-offs, or frame conflicts. In the same way, the case illustrates how deliberative governance is proposed as a management strategy to create 'broad-based' policies that 'fit' all participants' framings. This suggests that, if participants are dissatisfied, more deliberations are needed to fit all stakeholder views. The difficult or even unsolvable nature of wicked problems (Rittel and Webber 1974) makes this management fit questionable. Proposing more or better deliberations to overcome frame conflicts, which will not satisfy all participants, could lead to disappointment, distrust, and self-reinforcement in deliberative governance.

An interesting research question could be whether the self-referential technical framing in deliberative governance is actually an example of self-reinforcing mechanisms in framing (Noodegraaf-Eelens et al. 2012). And, if so, what are the preconditions for frames to become self-reinforcing? Is this mechanism associated with specific policy domains, specific type of frames, actors involved, or the institutional rules of the framing game? Or is it simply the dominant societal discourse which determines what frames are likely to become self-reinforcing: is the contemporary societal focus on 'efficiency' as a dominant problem solver making (non-political) technical frames likely to become self-reinforcing? And what would that mean for political frames, can they become self-reinforcing too?

#### *8.3.2.2 Explaining political bystander effects in governance*

A second, possibly related, mechanism that could inspire research questions seems to be the political bystander effect in governance that I define after Darley and Latane (1968) in chapter 5. On the basis of in-depth analysis of one case study, I suggest that the combination of limited institutionalisation, social fragmentation, and dominant depoliticised or technical frames in the specific neo-corporatist arrangement leads to Darley and Latane's preconditions. Correspondingly, I observed political decision makers hesitant to negotiate or take decisions. Although a similar case in the different state tradition of the UK with different outcomes confirms my ideas about a political bystander effect, drawing conclusions on the causal link between the preconditions for a bystander effect and the actual effect in deliberative governance requires more empirical research. A possible approach could be to extend my research to a limited number of theoretically informed carefully chosen cases; this could yield more in-depth insight into the precise causal mechanisms behind a

possible political bystander effect. Explorative questions to guide the selection of cases could be whether specific policy domains or framings seem more prone to political bystander effects, or whether there are cases where the preconditions are met but a political bystander effect does not emerge? To draw conclusions on the significance of institutional arrangements in explaining the effect, research should cover a large number of cases, which could be compared across state tradition or institutional setting and, if well set up, possibly reveal significant relations. Both approaches could be strengthened by a quantitative methodology and comparative analysis.

#### *8.3.2.3 What governs governance?*

A third issue which might point towards further research is more case specific, although related to the emergence of a political bystander effect in deliberative governance. The Dutch DPIJ case discussed in chapters 5, 6, and 7 not only illustrates an innovative deliberative governance approach to wicked problems that stretch over multiple administrative scales, but also points towards a trend which is occasionally identified by Dutch national councils reviewing the Dutch public administrative systems (Dijstelbloem et al. 2010, RMO 2013, Elzinga et al. 2014, Commissie voor de Evaluatie van de RUD's 2014). The case shows that, to manage complex public goods, policymakers increasingly struggle with how to get things done in an increasingly fragmented society, and corresponding political and administrative organisation. As discussed in chapter 2, empirical notions on decentred and deliberative governance are increasingly applied prescriptively and across administrative scales to deal with this new societal complexity. However, as my thesis suggests, with rules, regulations, and responsibilities becoming more ambiguous in these decentred approaches, the question may be raised as to whether this specific answer to complex problems and societal fragmentation is not becoming the problem itself. The political bystander effect that I describe in chapter 5 might testify to that. At a general level, this raises the question of who decides what governance strategies are applicable and how they (should) relate to the constitutional arrangements? And based on what governance ideas (cf. Rayner 2015)? In other words: what is governing governance? In *what* way is *who* watching over existing constitutional arrangements and how they are interpreted and applied? Or, in line with Dijstelbloem et al. (2010), RMO (2013), Elzinga et al. (2014), and Commissie voor de Evaluatie van de RUD's (2014), what are the consequences of a somehow organically evolving interpretation and operationalisation of the Dutch constitutional arrangement known as the House of Thorbecke? And what does this mean for the means to govern?

#### *8.3.2.4 Analysing frame interactions quantitatively*

Finally, my thesis raises two methodological questions, partly related to the research questions discussed above. One of the limitations of this thesis is its case-specific conclusion. Through cross-case comparison, the thesis does indicate patterns and relations, and hints at mechanisms in governance. Nevertheless, the number of cases that I was able to investigate was only four. To develop a thorough

understanding of frames becoming self-reinforcing, relations between processes of faming, Darley and Latane's (1968) preconditions, and the emergence of political bystander effects in governance, research ideally needs both a much larger number of case studies and a systematic analysis of frame interaction processes. Despite the value of qualitative case study research for exploratory purposes, such research could be strengthened by developing quantitative data collection techniques and quantitative analysis of frame interaction processes. This would allow us to statistically test the findings from exploratory case study research. This quantitative analysis should go beyond concept-based text analysis as is common in media studies but could be in line with Miller and Riechard's (2001) multidimensional scaling of frame developments. This method allows for analysing and comparing developments in textual phrases or frames in debates on a larger and more systematic scale.

#### *8.3.2.5 Learning-by-doing*

Apart from the analytical strength that quantitative analysis could add to our theoretical understanding of the issues, my thesis shows a second under-investigated methodological issue. Chapter 7, Boezeman et al. (2015), and Boezeman et al. (2014) show that in-depth investigation of frames and frame interactions allows for better understanding of how a wide variety of frames lead to policy outcomes. In addition, the research is among one of the few studies in the governance of adaptation to climate change that intentionally applied action research for part of its analysis and knowledge dissemination. This research-in-situ (van Buuren et al. 2014) not only further elucidated the variety of frames at stake in a specific governance context, but also enabled a better and more adaptive application of developed knowledge for governance purpose. Research-in-situ -like the various forms of action research- enables researchers to gain access to often closed governance contexts (Boezeman et al. 2014). It opens side-street views to governance problems which from a distance might appear as unambiguous official main-street views presented in policy documents or resulting from interviews with government officials. By taking part in actual governance practice, the researcher might learn what frames, knowledge, and types of investigation work as part of a research method simply by doing. In addition, this learning-by-doing allows for adaptive co-production of knowledge with governance actors and therefore enables the organisation of power to get specific meanings disseminated in the governance context (Jasanoff 2004). In line with Wagenaar (2011), action research therefore seems undervalued as a research method for gaining in-depth understanding of complex governance practices and deserves scholarly attention. Nevertheless, as my thesis also shows, different institutional arrangements and different researcher and practitioner ambitions might demand different types of action research. What these types are, and what the consequences of choosing each type are in different institutional arrangements, could be systemised through further research.

### *8.3.3 Implications for public policymaking*

Apart from the theoretical insights, reflections on the limitations of the thesis, and the possibilities it reveals for further research, the thesis allows for making some recommendations for public policy.

#### *8.3.3.1 Be aware of the variety of societal frames*

My thesis indicates that frames matter for policy processes and policy outcomes. Chapter 3 shows that this is only meagrely acknowledged in climate adaptation governance research, and chapters 5, 6, and 7 show that this somehow corresponds with climate adaptation governance initiatives. This shows that becoming aware of the variability of societal frames, and especially the variability of frames of players directly involved in governance processes, might allow for more effective and legitimate climate adaptation governance processes. In addition, it might be of importance for policymakers to both acknowledge and present policymaking as a matter of *navigating* these frames. As preluded in chapter 1, the wickedness of the climate issue makes adaptation to climate change a matter of dead reckoning, for which exploring societal frames and employing these frames strategically in developing adaptation routes might become essential. Presenting climate adaptation governance as a tame problem is at some point likely to yield disappointment and scepticism. Presenting climate adaptation governance as a matter of *dead reckoning* over a wicked problem leaves discursive room for explaining uncertain events, changing societal currents, and policy learning.

#### *8.3.3.2 Be aware of state traditions*

As indicated in chapters 4, 7, Boezeman et al. (2015), and Boezeman et al. (2014), and concluded in chapter 6, institutional arrangements, especially in relation to the tradition of state organisation, matter for how frame interactions play out. Although it might sound ironic to recommend a civil servant to be aware of his/her own constitutional *raison d'être*, being aware of the state tradition and the related institutional arrangement for governing adaptation to climate change might be a good idea. At a fundamental level, this awareness might help to elucidate what might be effective strategies for organising climate adaptation in the first place. In line with what others have shown in different policy fields (Culpepper 2002, Halffman 2009, Visser and Hemerijck 1997), my case comparison indicates that what might seem old-fashioned at first sight might be effective for problem structuration and generate policy action on unstructured or wicked problems.

#### *8.3.3.3 Be modest in depoliticising wicked problems*

In relation to that, a third recommendation would be to maintain a degree of modesty in depoliticising. As chapters 5 and 7 indicate, depoliticising allows for learning, but learning alone does not solve wicked problems. If frame differences are modest, social learning and fashionable methods such as *joint fact-finding* might help to create shared understandings. If frames as more

heterogeneous however, this might create coalitions, or specific frames that become dominant but do not necessarily lead to majorities or collective consensus. If politicisation occurs, an additional recommendation would be to allow for this politicisation in an institutionalised context. This could be a context in which the government takes the lead and sets the rules like in the typical Dutch neo-corporatist tradition. Or this context could involve less governmental action, but coordinating rules about roles and responsibility instead through national legislation (RMO 2013). The UK might be an interesting example of the second approach. Nevertheless, be aware that the UK has a different state tradition which traditionally organises coordination of governance through national legislation. The UK, by the way, cannot boast of unambiguous success stories in climate adaptation (Committee on Climate Change 2014).

#### *8.3.3.4 Navigate frames by creating the right institutionalised context*

My recommendations to policymakers can be summarised as follows: Conflicting frames need frame exploration and negotiation to create consensus, or the establishment of majority coalitions through frame incorporation. Both approaches seem to be more effective and legitimate if organised in closed institutional contexts with limited exit power. Creating these arenas might influence who is on board and who is not, and therefore might determine the characteristics of the framing game. Designing institutional arenas could enable policymakers to navigate frames. On the other hand, not all institutional arrangements fit existing state organisation or systems of interest intermediation between society and the state. Dealing with conflicting frames therefore might need thorough consideration of how to institutionalise arenas for what Dewulf and Bouwen (2012) define as 'doing differences'.

## 8.4 Epilogue: when horizons become hazy

If we go back to the metaphor of climate change as *dead reckoning*, most literally this thesis confirms how climate change poses society with the challenge of navigating offshore. Uncertainty and societal plurality make climate change a wicked business with horizons becoming hazy and decreasing coastal high ground to rely on. What this study highlights is that climate adaptation is not only about gratuitous navigation of ideas and knowledge, but also about navigation as the complex business of organising power, deciding where to go, and getting things done; business which in plural societies generally requires some form of political play. To deal with hazy conditions of uncertain climate knowledge and fragmenting societal organisation, scholars propose deliberative governance approaches across administrative scales to obtain better knowledge and legitimacy among the actors affected by the issue at stake. This we see reflected in the DPIJ case. The case indicates, however, how deliberate arrangements could yield extensive puzzling across scales and sectors, and this coincides with depoliticisation and -intentionally or not- implicit empowerment of administrators and experts. Despite processes of reframing and learning, the open ad hoc organised

deliberative approach did not lead to political negotiation, powerful societal coalitions, or clear decision making based on societal ambitions.

The *travelling* of these more deliberative Anglo-Saxon approaches to a continental neo-corporatist context fits a broader trend in governance studies and Dutch public policy (Bevir and Rhodes 2003, Dijstelbloem et al. 2010, Dryzek 2010, RMO 2013). What my thesis shows is that this trend might not only coincide with a process of horizons becoming hazy, but also enforce a process of the political 'high ground' becoming hazy. If decentred networks take over, and problems remain ambiguously defined to keep all participants on board, the 'political' process of ordering society or powering (Heclo 1974, Jasanoff 2004) might also become hazy. The DPIJ case might be an example of political negotiations shifting away from traditional political arenas to expert networks or administrative committees where they emerge as technical translations. The process might be akin to the re-allocation of public accountability, which is being discussed in light of the decentralisation and privatisation of public services and the fragmentation of societal representation (Dijstelbloem et al. 2010). In this hazy context, it might become unclear *who* takes the political high ground *where*; and this might inform (normative) discussions about decreasing transparency and accountability (Stoker 1998, Jessop 1998, Eeten 2001), but, more importantly, if a deliberative process starts, it might become unclear *how* to take political high ground. If frames become technical and player dependencies unclear, the process of powering necessarily becomes a rather technical business of how to make things better for the governance collective as a whole -a process which has been shown to reinforce its technical frames and therefore is likely to reinforce hazy dependencies. Contrasting the modern DPIJ initiative with traditional neo-corporatist decision making indicated how clearly defined ambitions and the institutionalisation of player dependencies did not translate into a hazy political high ground.

The process of the political high ground becoming hazy raises new questions concerning capacities for governing long-term problems in plural societies. Can we classify this hazy high ground as an unintended effect of an Anglo-Saxon trend, which seems to avoid societal controversy at first sight, but which in an alien constitutional context may hamper effective decision making in the long run? And might deliberative governance in itself suggest societal participation as an efficiency solution, but in the event of inevitable political trade-offs face societal disappointment and controversy in the long run? In sum, is a hazy political high ground a symptom of a cure becoming the problem? In the Dutch case, this would point towards a need to reconsider the House of Thorbecke and the neo-corporatist tradition to allow better for navigating frames in a fragmenting society. More coordination of roles and responsibilities in societal participation through national legislation might be a promising idea (RMO 2013), of which the British case might be an interesting example. Nevertheless, Britain is not exemplary in its climate adaptation track record, and, in contrast to recent Dutch history, floods are frequent (Committee on Climate Change 2014). As the Dry Feet 2050 case shows, maintaining the House of Thorbecke and the neo-corporatist relations with society could be another possibility to enhance decision making. In that case, this thesis points towards modesty in initiating deliberative governance. Incorporating learning as a specific goal in the neo-corporatist-flavoured policy processes could overcome the ritualistic decision-making

processes discussed in the Dry Feet 2050 case.

Whether organised in a deliberative or a neo-corporatist fashion, climate change adaptation with its uncertain knowledge and ambiguously understood impacts on changing societal contexts remains a form of dead reckoning. Above all, it seems wise to frame the process of adapting to climate change as dead reckoning, thereby fitting its wicked nature and allowing uncertain events to be explained, anticipating changing societal currents, and learning-by-doing.

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# Appendix I

## Search queries on knowledge and power conceptualizations in CCAG literature:

1. General Climate adaptation governance:

TITLE-ABS-KEY((“**climat* change**” OR “**global warming**”) AND (**adapt***) AND (**govern***)) total 1132; H-factor 40

2. Climate adaptation governance + unorganized knowledge:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND (learn* OR puzzl* OR idea* OR ((knowledge OR experience) AND shar*) OR framing OR frame OR frames OR deliberat*)) total 181; H-factor 21

3. Climate adaptation governance + organized knowledge:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND (**model*** OR **techn*** OR **scenar***)) total 438; H-factor 30

4. Climate adaptation governance + unorganized power:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND (negot* OR striv* OR *powering* OR (*power* AND play*) OR (“power relation*”) OR (*power* AND dynamic*) OR (*power* AND process*))) total 70; H-factor 9

5. General Climate adaptation governance + organized power:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND (**institution*** OR **regulat*** OR **law*** OR **legal***)) total 436; H-factor 28

6. Climate adaptation governance + no knowledge:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND NOT (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND NOT (**model*** OR **techn*** OR **scenar***)) total 608; H-factor 28

7. Climate adaptation governance + no power:

TITLE-ABS-KEY((**“climat* change”** OR **“global warming”**) AND (**adapt***) AND (**govern***) AND NOT (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**“power relation*”**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***)) AND NOT (**institution*** OR **regulat*** OR **law*** OR **legal***)) total

684; H-factor 33

**Combined search queries on knowledge and power conceptualisations in CCAG literature:**

1. organized knowledge + organized power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**model*** OR **techn*** OR **scenar***) AND (**institution*** OR **regulat*** OR **law*** OR **legal***)) total 152; H-factor 18

2. Unorganized knowledge + organized power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**institution*** OR **regulat*** OR **law*** OR **legal***) AND (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***)) total 91; H-factor 14

3. organized knowledge + unorganized power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**model*** OR **techn*** OR **scenar***) AND (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***))) total 26; H-factor 5

4. Unorganized knowledge + unorganized power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***))) total 16; H-factor 3

**Combined search queries on either knowledge or power conceptualisations in CCAG literature**

5. Unorganized knowledge + no power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND NOT (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***)) AND NOT (**institution*** OR **regulat*** OR **law*** OR **legal***)) total 85; H-factor 13

6. Organized knowledge + no power

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**model*** OR **techn*** OR **scenar***) AND NOT (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***)) AND NOT (**institution*** OR **regulat*** OR **law*** OR **legal***)) total 266; H-factor 22

7. Unorganized power + no knowledge

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***)) AND NOT (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND NOT (**model*** OR **techn*** OR **scenar***)) total 35; H-factor 8

8. Organized power + no knowledge

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND (**institution*** OR **regulat*** OR **law*** OR **legal***) AND NOT (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND NOT (**model*** OR **techn*** OR **scenar***)) total 221; H-factor 15

9. No power + no knowledge

TITLE-ABS-KEY((**"climat* change"** OR **"global warming"**) AND (**adapt***) AND (**govern***) AND NOT (**negot*** OR **striv*** OR ***powering*** OR (***power*** AND **play***) OR (**"power relation*"**) OR (***power*** AND **dynamic***) OR (***power*** AND **process***)) AND NOT (**institution*** OR **regulat*** OR **law*** OR **legal***) AND NOT (**learn*** OR **puzzl*** OR **idea*** OR ((**knowledge** OR **experience**) AND **shar***) OR **framing** OR **frame** OR **frames** OR **deliberat***) AND NOT (**model*** OR **techn*** OR **scenar***)) total 356; H-factor 25

# Appendix II

## Table 1

| Organised knowledge and organised power | | | | |
|---|---|---|---|---|
| Nr. | Author(s) | Level of governance | Empirical or theoretical focus | Knowledge and power interplay conceptualised |
| 1 | (Mills 2005) | National | Empirical | Organised power (regulators and regulation) and organised knowledge (damage models) in CCAG are diagnosed and conceptualised as static but problematic in relation to a changing climate. Both are approached as separate dimensions in CCAG which in the specific case interplay in a non-preferable way with a changing climate. Models and regulation should change. |
| 2 | (Challinor et al. 2007) | National | Theoretical | Organised power (institutions) and organised knowledge (climate models, crop yield models) are diagnosed and show an un-preferable picture in combination with a changing climate. Institutions should change to overcome this problematic picture. |
| 3 | (Easterling 1996) | National | Theoretical | Organised power (political institutions) together with organised knowledge (models & techniques) are parameters in a full system analyses to predict non-preferable consequences of a changing climate. No conceptual integration is made between institutions, models or techniques. |
| 4 | (Tompkins and Adger 2005) | National | Theoretical | Organised power (institutions) and organised knowledge (techniques) are conceptualised as central to CCAG, together with social behaviour and learning. Hence, the article goes beyond organised power and knowledge alone and includes unorganised power too in its conceptualisation of CCAG. In addition the paper conceptualises the relation between institutions and social behaviour by explaining the role of institutions on behaviour and techniques as response mechanisms to CC. |
| 5 | (Belliveau et al. 2006) | Local / National | Empirical | Organised power (institutions) and organised knowledge (agricultural techniques) are assessed for influence on farmers sensitivity for climate change. The relation between institutions and techniques is not conceptualised. |
| 6 | (Tyler et al. 2007) | Local / National | Empirical | Organised power (institutions and legal constrains) and organised knowledge (models and knowledge systems) are assessed for their influence on herders vulnerability for climate change impacts. No conceptualisation is made of the relation between knowledge systems and legal / institutional systems. |
| 7 | (Biesbroek et al. 2010) | National | Empirical | Among other governance issues organised power (institutions and regulation) and organised knowledge (techniques) are assessed and compared among different European nation states. A possible interplay between institutions and techniques is not conceptualised. |
| 8 | (Allman et al. 2004) | Local | Empirical | Among a wide range of aspects organised knowledge (regulation) and organised knowledge (techniques) are assessed in explaining the success of local CCAG systems. The article also covers unorganised forms of knowledge (learning) but does not conceptualise a possible interplay. |
| 9 | (Sanders and Phillipson 2003) | National | Theoretical | Organised power (insurance and building regulation & regulators) and organised knowledge (knowledge systems on climate, techniques, like buildings) are assessed in view of a changing climate. There is a dependant relation conceptualised between both. Knowledge systems consisting of decades of climate data determine regulation and will only very gradually change. |
| 10 | (Ford et al. 2010) | National | Empirical | Among a variety of CCAG aspects organised power (institutions) and organised knowledge (technology) are assessed in their role in health vulnerability of aboriginals in context of a changing climate. Both concepts are conceptually linked with unorganised forms knowledge (learning) by assessing their capacity to adapt. |

## Table 2

| Unorganised knowledge and organised power | | | | |
|---|---|---|---|---|
| Nr. | Author(s) | Level of CCA governance | Empirical or theoretical focus on CCAG | Knowledge and power interplay conceptualised in CCAG |
| 1 | (Pahl-Wostl 2009) | Not explicitly addressed. Implicitly the national or local level of governance is mentioned as the level of analyses. | Theoretical with empirical illustrations | Organised power (institutions) is related to unorganised knowledge (learning) through single, double and triple loop learning. CCAG institutions exist of agents which may learn from each other in networks of various complexity, the complexer the network the better the institutional learning. |
| 2 | (Pelling et al. 2008) | Not explicitly addressed, cases are at a national level | Theoretical underpinned by a single case study | Organised power in form of CCAG organisations are dealing with unorganised knowledge (learning) through individual learning and collective learning at different levels. When learning takes place at a discrete subgroup level , mutual institutions will change and ultimately the organisation will learn as a whole and change accordingly. |
| 3 | (Tompkins and Adger 2005) | All levels | Theoretical | Organised power in form of institutions in CCAG is mentioned as structural to acceptability, resource availability and social change. In this context social learning is mentioned as important for response capacity to climate change. |
| 4 | (Nelson et al. 2008) | National | Empirical | Organised power in form of institutions and state organisations coproducing CCAG knowledge in cooperation with local communities is conceptualised as adaptive governance. |
| 5 | (Gupta et al. 2010) | Local / National | Theoretical | A model is developed for assessing forms of organised power (e.g. institutions) on their capacity to adapt to changing circumstances like climate change. Learning is considered one of the central capacities for adaptive capacity. |
| 6 | (Tompkins 2005) | National | Empirical | Organised forms of power (e.g.) national institutions are examined to their adaptive capacity. The willingness to learn, and learning-based institutions are conceptualised as institutional resilience. In addition the author links to more unorganised forms of power by stressing the need for prioritisation. |
| 7 | (Shackley and Deanwood 2002) | Local | Empirical | Taking an agent centred approach in which organised forms of power (institutions) are conceptualised as perceptions or 'frame of reference' The fit of the climate change framing with the existing institutional or 'system' frame of reference and other existing frames of reference like 'processes' and 'response mechanisms' determine the responsiveness of governance to climate change adaptation. |
| 8 | (Dovers and Hezri 2010) | Not relevant | Review of literature | Organised forms of power in CCAG are conceptualised as institutions and regulation after a common understanding in CCAG literature. This is done in the same way for unorganised forms of knowledge like learning and the sharing of knowledge. The lack of integration of both aspects in CCAG literature is mentioned as a challenge for CCAG science. Studying the concept of policy processes is mentioned as a possible integration of both concepts. |
| 9 | (Dougill et al. 2010) | Local | Empirical | Organised forms of power (institutions) are mentioned together with unorganised forms of knowledge (learning) as important. A conceptual link between both dimensions is not specified, although institutions are mentioned as a possible enforcement for learning. |
| 10 | (Tompkins et al. 2008) | National | Empirical | Organised forms of power (e.g. institutions) are conceptualised next to other forms of power (e.g. support by local population) and unorganised forms of knowledge (learning and sharing of knowledge) as important for response to climate change impacts. The interplay of both is conceptualised as 'learning-based institutions' but is not elaborated. |

## Table 3

| Organised knowledge and unorganised power | | | | |
|---|---|---|---|---|
| Nr. | Author(s) | Level of governance | Empirical or theoretical focus | Knowledge and power interplay conceptualised |
| 1 | (Underdal 2010) | Global / national / local | Theoretical | Organised knowledge and unorganised power are conceptualised as different governance models (centralised depending on concentrated negotiational power, or decentralised depending on decentralised, adapted knowledge systems), each functioning best in specific conditions. |
| 2 | (McGee and Taplin 2009) | Global | Empirical | Organised knowledge (models on how to combat climate change) and unorganised power (international negotiations) are conceptualised as intertwined. Through discursive analysis the authors conclude that the model underpinning the APP international agreement on adaptation and other measures combating climate change has impacts on international negotiations on the Kyoto protocol. |
| 3 | (Roncoli et al. 2009) | National | Empirical | Organised knowledge (modelling tools) and unorganised power (negotiation) are conceptualised rather separately. The interplay emerges where the authors describe how modelling tools give handles for negotiation |
| 4 | (Carey et al. 2012) | National | Empirical | Organised knowledge (climate models and technology) and unorganised power (negotiations) are conceptualised as 'mutually constitutive', where climate models and technologies shape power relations yielding the concept 'politics of technologies' |
| 5 | (Mahony and Hulme 2012) | Global / National | Empirical | Unorganised knowledge (deliberation and re-framing) in relation to the development of organised knowledge (climate models and expertise) is conceptualised as influencing unorganised power (negotiations). Knowledge hegemony at the IPCC therefore influences the power of the global south to adapt to CC. This leads to the possibility of taking a normative stance in the production of organised knowledge. |
| 6 | (Feldman 2012) | National /local | Theoretical | Both unorganised (sharing of experiences) and organised knowledge (models & technology) is hindered in its effect on climate impacts due to both unorganised (negotiations) and organised power (institutions). The relation between both dimensions is conceptualised in 'boundary work' which might be less or more effective due to different forms of unorganised and organised power. |

## Table 4

| Unorganised knowledge and unorganised power | | | | |
|---|---|---|---|---|
| Nr. | Author(s) | Level of governance | Empirical or theoretical focus | Knowledge and power interplay conceptualised |
| 1 | (Brown et al. 2007) | Global | Theoretical, empirically illustrated | Unorganised knowledge (frames) is conceptualised in relation to unorganised power (negotiations). If climate adaptation is internationally framed as a security issue, this will change negotiational power for effected regions like Africa in relation to the international community. |
| 2 | (Roncoli et al. 2009) | National | Empirical | Unorganised knowledge (frames) is conceptualised in relation to the deliberative use of organised knowledge (models) in unorganised power (negotiations). |
| 3 | (Mahony and Hulme 2012) | Global / National | Empirical | Unorganised knowledge (deliberation and re-framing) in relation to the development of organised knowledge (climate models and expertise) is conceptualised as influencing unorganised power (negotiations). Knowledge hegemony at the IPCC therefore influences the power of the global south to adapt to CC. This leads to the possibility of taking a normative stance in the production of organised knowledge. |
| 4 | (Vink et al. 2012) | National | Empirical | Unorganised knowledge (frames) is conceptualised in relation to employed knowledge systems and the possible negotiational strategies this framing enables |
| 5 | (Feldman 2012) | National / Local | Theoretical | Both unorganised (sharing of experiences) and organised knowledge (models & technology) is hindered in its effect on climate impacts due to both unorganised (negotiations) and organised power (institutions). The relation between both dimensions is conceptualised in 'boundary work' and 'knowledge networks' which might be less or more effective due to different forms of unorganised and organised power. |
| 6 | (Herrfahrdt-Pähle and Pahl-Wostl 2012) | National | Empirical | Unorganised power (negotiation) is conceptualised in relation with unorganised knowledge (learning) via the concept of 'triple loop learning'. This type of learning is yielding changing values and ultimately changing institutions. Via changed institutions this learning is related to sustained change in the characteristics of political negotiations over long term issues like CCAG. |
| 7 | (Manuel-Navarrete 2010) | National | Theoretical | Unorganised power (negotiational power relations) are conceptualised as closely related to unorganised knowledge (ideas and theories) currently leading to asymmetric global power relations hindering climate adaptation. |
| 8 | (Rojas et al. 2009) | National | Empirical | Unorganised knowledge (learning) is conceptualised as influencing unorganised power (negotiation) by proper multi-stakeholder consultation. |

# Summary

## Introduction

My thesis is inspired by the rapid rise in political attention on climate change from 2005 onwards, followed by the media hype known as 'climategate' and the subsequent fall in attention afterwards. The polarisation in the public debate between so-called activists and deniers shows that climate change is a classroom example of what scholars in policy and planning define as a *wicked* or *unstructured* problem. This type of problem is characterised by a wide variety of societal understandings or *frames* through which new knowledge is interpreted. Governing wicked problems is a tricky process and has a history of policy conflict and controversy. In this thesis, I aim to elucidate the process and outcomes of governing *adaptation* to climate change. I do so by focusing on the social interactions of public and private players in governance and how they develop meanings and related policy outcomes through their frame interactions.

The thesis starts with the notion that adapting to the long-term and uncertain character of climate change results in a special type of governing, especially in the context of the little institutionalised policy domain and the wide variety of societal frames involved. Governing adaptation to climate change involves careful monitoring of policy direction, speed, and societal current in relation to scientific projections and societal sensemaking of what climate impacts might be ahead. Navigating climate change therefore metaphorically boils down to a form of *dead reckoning*, a systemised method of monitoring course, speed, and current through which sailors in the age of discovery used to navigate their ships into the unknown.

Navigating hierarchically organised ships, however, is different from steering plural democratically organised societies. In policy sciences, this process of governing long-term policy issues in plural societies is traditionally defined as a dynamic process of both *puzzling* over what the issue means to society and *powering* to get things done. Puzzling and powering are broadly defined as interrelated; new meanings might alter actors' positions and corresponding policy outcomes, and changing power positions might alter societal understandings of what is at stake. Processes of puzzling and powering are considered to vary across traditions of state organisation and related institutional arrangements.

In the climate adaptation governance literature however, the governance process is differently defined. Scholars define governance of adaptation to climate change as a matter of getting the knowledge system right to design the right policies, and getting the institutional system right to enforce the policies. This static approach does not show an interrelated or dynamic understanding of actor-centred processes based on sensemaking and positioning. Other scholars define climate adaptation as a matter of developing the right knowledge, creating legitimacy, or enhancing justness through deliberative or participatory approaches to governing, but seem to neglect the need for power organisation to get things done.

To be able to contribute to both the policy sciences and the climate adaptation governance literature, the thesis opens up the black box of climate adaptation governance by zooming in on the actual policy deliberations in four concrete governance cases in different institutional arrangements and traditions of state organisation. To do so, I propose frame interactions as a means for better

understanding the traditionally defined interplay between processes of puzzling over meaning and powering over positions in different institutional contexts. This results in the following central research question:

> *In what way do frame interactions construct interplaying processes of puzzling over meaning and powering over positions in different institutional arrangements occupied with governing societal adaptation to climate change?*

## Research design

To investigate and compare the frame interaction processes in different institutional arrangements and state traditions, I started with a distant view towards frame developments in official water policy proposals over time. Using longitudinal frame analysis, I discussed these developments against the backdrop of a rise and fall in societal attention to climate change. Subsequently, I systematically assessed the scholarly approaches in making sense of climate adaptation governance. Inspired by both the developments in official policy framing over time and the different theoretical approaches to governance of adaptation to climate change, I opened the black box of frame developments and frame interactions in concrete governance practices. I adopted explorative case study research to get an in-depth understanding of the governance processes. By participatory observation, semi-structured interviews, and longitudinal frame analysis of policy deliberations in four different case studies, I was able to get in-depth understanding of governance processes in different institutional contexts. Because my research is embedded in the Dutch research programme Knowledge for Climate, which centres on climate adaptation governance challenges in the Dutch context, I took this Dutch context as my point of departure. The lowland delta nature of most of the Dutch territory makes the country potentially vulnerable to climate- related issues. Climate change poses governance challenges to delta regions in general, for which the Dutch delta might be an interesting illustration and an interesting case for academic inspiration and cross-national comparison.

In terms of institutional arrangements, Dutch adaptation to climate change empirically shows continuities as well as discontinuities with the traditional Dutch cornerstone of dealing with collective action problems through *poldering*. In two selected case studies, climate adaptation is mainstreamed in existing poldering approaches and follows what is traditionally defined as a *neo-corporatist* state tradition. In neo-corporatism, a limited number of traditionally defined organised interests negotiate with the state in an institutionalised fashion. One selected case study shows signs of discontinuity with this traditional approach, allowing for more ad hoc deliberation with a much wider and less organised array of stakeholders and societal actors, known as *deliberative governance*. This approach follows the pleas in the contemporary climate adaptation governance literature for more participation. To understand the implications of state traditions for framing processes, I compare the selected case studies with a fourth selected case study of a similar deliberative governance initiative in the *pluralist* state tradition of the UK. Pluralism entails less state involvement in policymaking, but more central coordination of societally initiated policy

actions through national legislation.

## Empirical chapters

### *Chapter 2*

Through a longitudinal frame analysis of official Dutch water management policy proposals to the general public, I analyse the development of policy frames in light of the emerging issue of climate change and the rise and fall of attention to it in media and politics. I conclude that: (1) official policy framing changes over time, and this is related to changing attention to climate change for which timescale framing is employed as political room to manoeuvre; (2) knowledge is selectively used in official policy framing; and (3) policy frames are strategically connected and disconnected and can be viewed as a conversation evolving over time. I discuss how this points towards a process of puzzling and powering, in which framing appears to play a role.

### *Chapter 3*

Triggered by the frame developments and the role that scientific knowledge and the organisation of power are suggested to play in the governance processes preceding official policy framing, I continue with a literature review of the scientific climate adaptation governance literature. The review systematically analyses how the scientific literature addresses the role of knowledge and power in the governance of climate adaptation. The analysis reveals that only a limited number of studies address both knowledge and power. The literature that does address knowledge and power can be categorised as adopting one of the following four approaches: (1) a rather dominant system assessment approach, (2) an adaptive capacity approach, (3) a politics of technology approach, and (4) a deliberative approach. In all approaches, a knowledge–power *interplay* is only very meagrely conceptualised. In response to the approaches to the governance of adaptation in the scientific literature, I propose a more dynamic understanding of policymaking. I do so by borrowing conceptualisations from policy literature on welfare state reform, which defines policymaking as interplaying processes of puzzling and powering.

### *Chapter 4*

To better understand the interplay of knowledge organisation and power organisation, I zoom in on a typical *boundary organisation* in climate adaptation: the Dutch Second Delta Committee. By conducting semi-structured interviews with committee members and analysing policy documents of this political advisory committee, I reconstruct the processes of developing official policy framing. Through the lens of boundary work theory, I describe how the scientifically constructed climate change problem was translated into societally legitimate policy recommendations. I follow

the boundary work literature in showing how internal practices in the committee determined how meaning got constructed in relation to scientific knowledge. I contribute to the literature by showing how strategic processes of interacting with a broader societal context largely determined the legitimacy and effectiveness of the committee's framing in political decision making.

### *Chapter 5*

In chapter 5, I further this in-depth investigation of governance processes by longitudinal analysis of 'on-the-spot' frame interactions between a wide variety of public and private players in ongoing governance processes of the Delta Committee's successor -the Delta Programme for the Lake Ijssel (Ijsselmeer) region. I conclude that: (1) frame interactions in a semi-open, ad hoc deliberative governance initiative shape both substantial and relational outcomes of the governance process and therefore shape the classically defined interplay between processes of puzzling and powering; (2) two archetypical frames can be defined: *technical frames* defining climate adaptation as a task, and *political frames* defining climate adaptation as social conflict; (3) the dominant technical framing in the governance process empowers administrators and experts, but leads to what I define as a *political bystander effect* among political decision makers in the process. I define three preconditions for this bystander effect: (a) ambiguous understandings of what is at stake due to dominant technical framings, (b) unclear roles and responsibilities due to the little institutionalised governance arrangement, (c) limited social cohesion due to the ad hoc governance character and unclear player dependencies. I discuss how the preconditions relate to the dominance of technical framing and the semi-open, little institutionalised ad hoc character of deliberative governance.

### *Chapter 6*

In chapter 6, I extend the understanding of frame interactions in relation to institutional arrangements and state traditions. By comparing the empirical analysis of three climate adaptation governance cases, I draw conclusions on how frame interactions and their outcomes relate to institutional context. The chapter compares the framing processes, actor involvement, and institutional arrangements of the deliberative governance process of Delta Programme Lake Ijssel with the British deliberative governance initiatives for their Regional Flood and Coastal Committees. In addition, the chapter compares both deliberative governance cases with a typical neo-corporatist approach adopted in the Dutch Dry Feet 2050 programme. I conclude that: (1) there appears to be non-linearity between state tradition and policy regimes in climate adaptation governance; (2) a neo-corporatist governance approach in a neo-corporatist state tradition results in effective decision making through frame exploration and negotiation, but lacks reframing and learning; (3) a deliberative governance initiative in a neo-corporatist state tradition and results in extensive learning, but suffers from depoliticisation and meets the three preconditions for a political bystander effect; (4) through central coordination of roles and responsibilities, the British pluralist

state tradition allows better for deliberative governance initiatives compared to the Dutch neo-corporatist tradition.

*Chapter 7*

In this last empirical chapter, I adopt a more reflective approach to the development and application of knowledge for governance purposes. I reflect on doing research for governance purposes. I conducted this so-called *action research* through participatory observation and frame reflection with policy actors in tandem with the research project discussed in chapter 5. In reflecting on the results of the action research project, I refer to the philosopher Wittgenstein and his plea for partnering with a '*bad*' *city guide* as a means of understanding complex problems through side-street views rather than a single main-street view, which I contrast with more conflict-based notions on solving policy problems. I conclude that in a deliberative governance setting: (1) partnering with a guide can be an effective action research method to educe frame analysis of the various side-street views on climate adaptation, thereby providing in-depth understandings of processes of puzzling and powering in climate adaptation governance; (2) liaising with a *bad guide* and a governance *gatekeeper* not only provided access to these various side-street views on governance, but also helped in the effective dissemination of the co-produced knowledge in the rest of the network. This illustrates how Wittgenstein's notions on developing knowledge worked to gain in-depth understanding of governance practices, but essentially boiled down to a process of powering to puzzle. I discuss how successful action research in context of deliberative governance of climate adaptation can therefore be seen as a special type of boundary work.

## Conclusion

In my final conclusion, I synthesise the most important findings of my research. From a distant view, I show how policy frames evolve over time as an ongoing long-term conversation between policy proposals. Zooming in on four case studies reveals a wide array of frames in governance processes, which can be classified according to the scales addressed in the frames, and the nature of the issues framed. In relation to framing the nature of the issue, two archetypical frames can be defined: technical frames and political frames. Frame interactions shape learning processes, but due to the inclusion and exclusion effect of frames they can never be viewed without more conflict-based notions on policymaking. Counterintuitively, technical frames appear to change power positions, but, in the same counterintuitive way, political frames allow for puzzling over roles and responsibilities as well. Therefore, the thesis shows how meaning alters power positions and frame interactions affect substantial and relational outcomes. I show how these insights complicate the *system assessment approach*, which is dominant in the climate adaptation governance literature, and prevent it from properly elucidating climate adaptation governance. Frames appear to *do* things in climate adaptation governance processes, from which I conclude that frames *navigate* climate

adaptation.

In addition to frame interactions as a puzzling and powering interplay, I show how a second interplay might be defined between institutions and frame interactions. Different institutional arrangements yield different frame interactions and outcomes. Institutional arrangements determine the rules of what can be defined as a *framing game* over wicked problems. Institutions also determine who is playing what framing game and therefore determine player dependencies. Institutions interplay with frame interactions, and may create the preconditions for effectively navigating the wide array of frames in climate adaptation governance. Without institutional demarcation of roles and responsibilities, the framing game might allow for new players and knowledge, but risks becoming gratuitous. In little institutionalised deliberative governance contexts without central coordination, frame interactions are likely to yield a dominant self-referential technical framing which empowers experts and promises technical efficiency solutions to a wicked problem. These contexts might yield the preconditions for what I define as a *political bystander effect* in deliberative governance. In addition, I show how state traditions play a role in what institutional arrangements yield what type of frame interactions. Therefore, I conclude that institutional arrangements in combination with state traditions play a role in how the variety of climate adaptation frames can be *navigated*.

These findings point towards my most important recommendations. For future research, I would suggest further investigation of: (1) the possible emergence of a dominant technical framing in deliberative governance; (2) the extent to which this framing might point towards what other scholars have labelled self-reinforcing frames; (3) related *political bystander effects* in specific combinations of governance arrangements, policy issues, and state traditions. In relation to that, my most important recommendations to policymakers are: (1) be aware of the variety of frames in governance, (2) be aware of state traditions, (3) choose the right institutional arrangement, and (4) be modest in depoliticising wicked problems. In general, my recommendation would be to frame climate adaptation as an ongoing process of *dead reckoning*, which allows for explaining uncertain events, anticipating changing societal currents, and learning-by-doing.

# Samenvatting

## Introductie

Mijn proefschrift vindt zijn inspiratie in de onstuimige politieke aandacht voor het klimaat issue vanaf 2005, de media hype die bekend staat als '*Climategate*', en de daaropvolgende verdwijning van de aandacht voor het onderwerp. De polarisatie in het publieke debat tussen de zogenaamde activisten en ontkenners laat zien dat klimaatverandering een schoolvoorbeeld is van wat beleidswetenschappers definiëren als een taai of ongestructureerd probleem. Ongestructureerde problemen worden gekenmerkt door een grote verscheidenheid aan maatschappelijke perspectieven of *frames* waarbinnen nieuwe kennis verschillend wordt geïnterpreteerd. Het omgaan met ongestructureerde problemen is een lastig proces en kent een geschiedenis van politiek conflict en controverse. In dit proefschrift probeer ik inzicht te krijgen in hoe deze lastige processen zich manifesteren in de bestuurlijke context van maatschappelijke aanpassing aan klimaatverandering, ook wel klimaatadaptatie genoemd. Ik probeer inzicht te krijgen door me te richten op de tekstuele interacties tussen zowel publieke als private actoren tijdens bestuurlijke bijeenkomsten over klimaatadaptatie. Ik breng tekstuele perspectieven of frames in kaart, waarna ik aan de hand van een frame analyse inzicht geef in de betekenis die actoren in interactie ontwikkelen over de kwestie. Tot slot probeer ik te begrijpen hoe deze betekenissen relateren aan de inhoudelijke en relationele uitkomsten van het bestuurlijke proces.

Het proefschrift begint met het idee dat aanpassing aan de langdurige en onzekere impacts van klimaatverandering een speciaal soort besturen vraagt, in het bijzonder in de context van het weinig geïnstitutionaliseerde beleidsdomein en de diverse maatschappelijke frames die bestaan rondom klimaatverandering. Beleid maken voor de onzekere lange-termijnimpacts van klimaatverandering vraagt een zorgvuldige monitoring van richting en snelheid van beleidseffecten in relatie tot nieuwe wetenschappelijke inzichten, projecties, en de maatschappelijke betekenissen die deze nieuwe inzichten krijgen. Het richting geven aan klimaatbeleid komt daarom figuurlijk neer op een vorm van *gegist bestek*; het gesystematiseerd monitoren van koers, snelheid en stroom zoals zeelieden in de 14$^{e}$ eeuw al toepasten bij het bepalen van een positie en koers in een nog grotendeels onbekende wereld.

Het navigeren van hiërarchisch georganiseerde schepen verschilt echter van het sturen van heterogene democratisch georganiseerde samenlevingen. In de beleidswetenschappen, is dit sturingsvraagstuk van oudsher dan ook gedefinieerd als een dynamisch sociaal proces van zowel *puzzelen* over wat het probleem betekent voor de samenleving, als het organiseren van *macht* om dingen gedaan te krijgen voor de samenleving. In het klassieke denken over beleid zijn het puzzelen en het organiseren van macht nauw met elkaar verbonden: nieuwe betekenissen kunnen machtsposities beïnvloeden en daarmee beleidsresultaten veranderen, en omgekeerd kan het veranderen van machtsposities de maatschappelijke opvatting veranderen over wat er op het spel staat. In de klassieke ideeën over hoe beleid gemaakt wordt gaat men er vanuit dat het puzzelen en het organiseren van macht verschilt

per staatstraditie en bijbehorende institutionele arrangementen.

In de wetenschappelijke literatuur over klimaatadaptatie, is dit bestuurlijke-proces echter anders gedefinieerd. Het besturen van klimaatadaptatie wordt gezien als een kwestie van kennissystemen die het beleid goed (zouden moeten) informeren, en de juiste instituties die het beleid adequaat (zouden moeten) uitvoeren. Deze statische benadering, zonder begrip van actor-gecentreerde processen, mist daardoor de rol van betekenisgeving en machtsorganisatie in zijn definitie van het beleidsproces. Soms ook definieert de klimaatadaptatie literatuur het bestuurlijk proces als een meer maatschappelijke kwestie waarbij deliberatie met en tussen maatschappelijke partijen wordt voorgesteld om maatschappelijk relevante kennis te verkrijgen, de legitimiteit van klimaatadaptatie te vergroten, of de rechtvaardigheid van het beleid te vergroten. Ook deze normatieve benadering lijkt het samenspel tussen betekenisgeving en machtsorganisatie uit de klassieke beleidsliteratuur echter te missen.

Om bij te dragen aan zowel de wetenschappelijke literatuur over beleidsprocessen als die over klimaatadaptatie, opent het proefschrift de *black box* van het bestuurlijke proces rondom klimaatadaptatie. Het proefschrift zoomt in op de bestuurlijke bijeenkomsten in vier concrete beleidsprocessen in verschillende institutionele arrangementen en tradities van staatorganisatie. Om een beter begrip te krijgen van het klassiek gedefinieerde samenspel tussen puzzelen en machtsorganisatie in verschillende institutionele contexten rondom klimaatadaptatie analyseer ik frame interacties in verschillende reeksen aan bestuurlijke bijeenkomsten. Het onderzoek centreert zich daarmee rond de volgende centrale onderzoeksvraag: *Op welke manier bepalen frame interacties het samenspel tussen processen waarbij gepuzzeld wordt over betekenis, en processen van machtsorganisatie door positionering in verschillende institutionele arrangementen rondom klimaatadaptatie?*

## Onderzoeksopzet

Om frame interacties te onderzoeken en te vergelijken in verschillende institutionele arrangementen en staatstradities, ben ik begonnen met van een afstand te kijken naar frame ontwikkelingen in de officiële beleidsaankondigingen in het Nederlandse waterbeheer door de tijd heen. Ik bekeek deze ontwikkelingen tegen de achtergrond van een toename en afname van de maatschappelijke aandacht voor klimaatverandering. Om het bestuurlijk vraagstuk achter deze frame verschillen beter te begrijpen heb ik vervolgens systematisch de wetenschappelijke literatuur over het onderwerp geanalyseerd. Geïnspireerd door zowel de frame ontwikkelingen in het officiële beleid en de verschillende theoretische benaderingen van het bestuurlijk vraagstuk rond klimaatadaptatie heb ik de 'black box' geopend achter de officiële frame ontwikkelingen in de officiële beleidsaankondigingen. Om een diepgaand begrip te krijgen van het achterliggende bestuurlijke proces heb ik in vier verschillende casussen concrete frame interacties bestudeerd tussen bestuurlijke actoren, en heb ik bekeken hoe deze interacties tot wat voor een uitkomsten leidden. Door participerende observatie, semi-gestructureerde interviews en longitudinale analyse van beleidsbijeenkomsten, was ik in staat

om diepgaande kennis van bestuurlijke processen te verwerven die ik kon relateren aan verschillende institutionele contexten. Vanwege de inbedding van mijn onderzoek in het Nederlandse onderzoeksprogramma Kennis voor Klimaat, dat centreert rond bestuurlijke uitdagingen in de Nederlandse klimaatadaptatie context, nam ik deze Nederlandse context als mijn uitgangspunt. Het laagland karakter van een groot deel van de Nederlandse delta, maakt het land potentieel kwetsbaar voor de gevolgen van klimaatverandering zoals overstroming, wateroverlast en verzilting. Daarbij vormt klimaatverandering een bestuur uitdaging voor deltagebieden in het algemeen, waarvoor de Nederlandse delta een interessante illustratie kan zijn. Het kan een interessante casus opleveren voor een cross-nationale vergelijking.

In termen van institutionele arrangementen, toont het Nederlandse klimaatadaptatiebeleid zowel continuïteit als discontinuïteit met de typische Nederlandse bestuurstraditie van 'polderen'. In twee geselecteerde casussen, is klimaatadaptatie geïntegreerd in reeds bestaande polder-benaderingen en volgt het beleid wat traditioneel gedefinieerd is als een neo-corporatistische staatstraditie. Neo-corporatisme, kenmerkt zich door een beperkt aantal van oudsher gedefinieerde georganiseerde belangen die in een geïnstitutionaliseerde context onderhandelen met de staat. Eén geselecteerde casus studie toont tekenen van discontinuïteit met deze traditionele aanpak. Deze ad hoc georganiseerde overlegstructuur staat bekend als *deliberatieve governance* en kenmerkt zich door een veel breder en minder georganiseerd scala aan belanghebbenden en maatschappelijke actoren dat veelal informeel overlegt met de staat. Voor een deel volgt deze aanpak de participatieve lijn van denken in veel klimaatadaptatie literatuur. Om effecten van staatstradities op deze *deliberative governance* arrangementen te begrijpen heb ik de geselecteerde casus vergeleken met een vierde casus van vergelijkbaar *deliberative governance*-initiatief in de pluralistische staat traditie van het Verenigd Koninkrijk. Pluralisme kenmerkt zich door minder staatsbetrokkenheid bij beleidsvorming, maar meer centrale coördinatie van maatschappelijk initiatieven via nationale wetgeving.

## Empirische hoofdstukken

### *Hoofdstuk 2*

Door middel van een longitudinale frame analyse van officiële beleidsaankondigingen in het Nederlandse waterbeheer, analyseer ik de ontwikkeling van beleidsframes in het licht van de opkomst en ondergang van de maatschappelijke aandacht voor klimaatverandering. Ik concludeer dat: (1) de officiële beleidsframing verandert in de tijd, dat dit gerelateerd is aan het veranderen van de aandacht voor klimaatverandering, waarbij de framing van de relevante tijdschaal wordt gebruikt als politieke manoeuvreerruimte; (2) kennis selectief wordt gebruikt in de officiële beleidsframing; en (3) de opeenvolgende beleidsframes kunnen worden gezien als strategisch verbonden dan wel losgekoppelde fragmenten in een gesprek dat zich ontrolt door de tijd heen. Ik bediscussieer hoe dit wijst in de richting van een samenspel tussen puzzelen en machtsorganisatie, waarin framing een rol speelt.

*Hoofdstuk 3*

Getriggerd door de frame ontwikkelingen en de rol die kennis en de organisatie van de macht lijken te spelen in de bestuurlijke processen voorafgaande aan officiële beleidsframing, ga ik in hoofdstuk 3 verder met een review van de wetenschappelijke klimaatadaptatie literatuur. Deze review analyseert systematisch hoe de wetenschappelijke literatuur de rol van kennis en macht in het bestuurlijk proces rond klimaatadaptatie definieert. Uit de analyse blijkt dat slechts een beperkt aantal studies zowel de rol van kennis als van macht in klimaatadaptatie belicht. De literatuur wel kennis én macht belicht kan worden gecategoriseerd in vier benaderingen: (1) een dominante systeem-assessment benadering, (2) een benadering gericht op adaptief vermogen, (3) een benadering gericht op de politiek van technologie, en (4 ) een deliberatieve benadering. In alle benaderingen is het samenspel tussen kennis en macht slechts mager geconceptualiseerd. In reactie op deze magere conceptualisatie, stel ik een meer dynamische begrip van het bestuurlijk proces rond klimaatadaptatie voor. Ik doe dat door theorie te lenen uit de klassieke beleidsliteratuur over macro-economie en welvaartsstaathervorming. Deze literatuur definieert het bestuurlijk proces primair als samenspel tussen puzzelen en machtsorganisatie.

*Hoofdstuk 4*

Om beter empirisch inzicht te krijgen in de interactie tussen kennisorganisatie en machtsorganisatie, zoom ik in hoofdstuk 4 in op een typische *boundary organisation* of grenswerk-organisatie tussen kennis en beleid rond klimaatadaptatie: de Nederlandse Tweede Deltacommissie. Door het uitvoeren van semi-gestructureerde interviews met leden van de commissie en het secretariaat en het analyseren van beleidsdocumenten van deze politieke adviescommissie, reconstrueer ik de ontwikkeling van de commissie's officiële beleidsframing. Door de lens van de grenswerk-theorie, beschrijf ik hoe de wetenschappelijk geconstrueerde klimaat kwestie werd vertaald in maatschappelijk legitieme beleidsaanbevelingen. Ik volg de grenswerkliteratuur in het tonen van hoe de interne praktijken in de commissie bepalen hoe maatschappelijke betekenis wordt gegeven aan de wetenschappelijke kennis. Ik draag bij aan de literatuur door te laten zien hoe de strategische processen van interactie met een bredere maatschappelijke context grotendeels de legitimiteit en effectiviteit van de framing bepaalden in de politieke besluitvorming.

*Hoofdstuk 5*

In hoofdstuk 5 ga ik verder met empirisch onderzoek naar concrete bestuurlijke processen. Ik doe dit aan de hand van een longitudinale analyse van 'on-the-spot' frame interacties tussen een breed scala van publieke en private actoren in de lopende bestuurlijke processen van het Deltaprogramma voor de IJsselmeer regio –de opvolger van de Deltacommissie. Ik concludeer dat: (1) frame interacties in een semi-open, ad hoc georganiseerd *deliberative governance* initiatief zowel inhoudelijke als relationele uitkomsten van het bestuurlijk proces bepalen, en dus het klassiek gedefinieerd samenspel

tussen puzzelen en machtsorganisatie vorm geven; (2) er twee archetypische frames kunnen worden gedefinieerd: technische frames die klimaatadaptatie als een uit te voeren opdracht definiëren, en politieke frames die klimaatadaptatie als sociaal conflict definiëren; (3) dat de dominante technische framing ambtenaren en deskundigen op de voorgrond zet in het bestuurlijke-proces en leidt tot wat ik definieer als een politiek omstandereffect onder de politieke besluitvormers. Ik definieer drie randvoorwaarden voor het optreden van een politiek omstandereffect: (a) een ambigue begrip van wat er op het spel staat, veroorzaakt door dominante technische frames, (b), onduidelijke rollen en verantwoordelijkheden wat samen gaat met het weinig geïnstitutionaliseerde *deliberative governance*, (c) beperkte sociale samenhang veroorzaakt door het ad hoc georganiseerde arrangement en onduidelijke onderlinge afhankelijkheden.

***Hoofdstuk 5***

In hoofdstuk 6, verdiep ik mijn begrip van frame interacties in relatie tot de institutionele arrangementen en staatstradities. Aan de hand van een vergelijkende analyse van drie bestuurlijke processen rondom klimaatadaptatie trek ik conclusies over hoe frame interacties en hun uitkomsten in relatie staan tot de institutionele context. Het hoofdstuk vergelijkt de framing processen, actor betrokkenheid, en institutionele arrangementen van het *deliberative governance* proces in het Deltaprogramma IJsselmeergebied met Britse *deliberative governance* initiatieven in Regional Flood and Coastal Committees. Daarnaast vergelijk ik beide *deliberative governance* casussen met de typisch neo-corporatistische aanpak van het Nederlandse Droge Voeten 2050 klimaat adaptatie programma. Ik concludeer dat: (1) er geen lineariteit bestaat tussen staatstraditie en institutionele arrangementen in klimaatadaptatie; (2) een neo-corporatistisch arrangement in een neo-corporatistische staatstraditie resulteert in effectieve besluitvorming door middel van frame-exploratie en onderhandeling, maar dat reframing en leren ontbreekt; (3) een *deliberative governance*-initiatief in een neo-corporatistische staatstraditie resulteert in uitgebreid leren, maar lijdt tot depolitisering en de drie voorwaarden voor een politiek omstandereffect; (4) de centrale coördinatie van rollen en verantwoordelijkheden in de Britse pluralistische staatstraditie zorgt voor effectievere besluitvorming in *deliberative governance* initiatieven vergeleken met de Nederlandse neo-corporatistische traditie.

***Hoofdstuk 7***

In dit laatste empirische hoofdstuk, kies ik voor een meer reflectieve benadering. Ik reflecteer op het doen van onderzoek voor bestuurlijke doeleinden. Ik heb dit zogenaamde *actie-onderzoek* gedaan aan de hand van participerende observatie en frame-reflectie met beleidsactoren parallel aan het onderzoeksproject besproken in hoofdstuk 5. In het reflecteren over de resultaten van dit actie-onderzoeksproject, verwijs ik naar de filosoof Wittgenstein en zijn pleidooi voor 'slechte' stadsgidsen om beter begrip te krijgen van complexe problemen. De 'slechte' stadsgids is geneigd

vooral de zijstraten van zijn eigen leefomgeving te laten zien in plaats van uitzicht te bieden op de beroemde hoofdstraten. Ik contrasteer deze ideeën over leren met meer conflict georiënteerde ideeën over het oplossen van beleidsproblemen. Ik concludeer dat in een *deliberative governance* arrangement: (1) het optrekken met een 'slechte' stadsgids een effectieve actie-onderzoeksmethode kan zijn voor het naar voren brengen van de verschillende perspectieven binnen de bestuurlijke praktijken rondom klimaatadaptatie, wat daarmee de processen van puzzelen en het organiseren van macht inzichtelijk maakt; (2) samenwerking met een 'slechte' stadsgids en een 'poortwachter' van een *deliberative governance* initiatief niet alleen toegang en begrip verschaft tot de verschillende perspectieven, maar ook helpt bij de effectieve verspreiding van de ontwikkelde kennis in de rest van het *governance* netwerk. Dit illustreert hoe Wittgensteins' noties van toepassing zijn om kennis te vergaren van bestuurlijke praktijken, maar tevens neerkomen op het constant organiseren van support en macht om te kunnen puzzelen. Tot slot bediscussieer ik hoe succesvol actie-onderzoek in de context van *deliberative governance* kan worden gezien als een speciaal type grenswerk.

## Conclusie

In mijn slotconclusie synthetiseer ik de belangrijkste bevindingen van mijn onderzoek. Van een afstand laat ik zien hoe beleidsframes van verschillende beleidsvoorstellen evolueren als een voortdurend gesprek door de tijd. Door in te zoomen op vier casussen laat ik zien dat er een breed scala van frames bestaat in bestuurlijke processen. De frames kunnen worden ingedeeld op basis van de geografische-, bestuurlijke- en tijdsschalen die de frames adresseren. Daarnaast kunnen de frames worden ingedeeld aan de hand van de aard van het probleem dat de frames adresseren. Wat betreft de aard van het probleem kunnen twee archetypische frames worden gedefinieerd: technische frames en politieke frames. Frame interacties geven vorm aan leerprocessen, maar als gevolg van het in- en uitsluitingseffect van frames kunnen ze nooit worden bezien zonder een meer conflict-gebaseerde kijk op beleidsvorming. Contra-intuïtief blijken technische frames machtsposities te veranderen, maar op dezelfde contra-intuïtieve wijze leiden politieke frames tot inhoudelijke reflectie op rollen en verantwoordelijkheden. Daarom laat dit proefschrift zien hoe betekenis machtsposities verandert en hoe frame interacties inhoudelijke en relationele beleidsuitkomsten beïnvloeden. Ik laat zien hoe deze inzichten de dominante systeem assessment benadering ter discussie stelt voor een goed begrip van bestuurlijke processen rondom klimaatadaptatie. Frames blijken dingen in beweging te zetten in bestuurlijke processen rondom klimaatadaptatie, wat maakt dat ik de conclusie trek dat frames klimaatadaptatie richting geven.

Naast het door frame interacties vormgegeven samenspel tussen processen van puzzelen en processen van machtsorganisatie, laat ik zien hoe een tweede samenspel kan worden gedefinieerd tussen institutionele arrangementen en de frame interacties binnen deze arrangementen. Verschillende institutionele arrangementen leiden tot verschillende frame interacties en uitkomsten. Institutionele arrangementen bepalen de regels van wat kan worden omschreven als een *framing game* over taaie en ongestructureerde problemen. Institutionele arrangementen bepalen ook wie welke *framing*

*game* speelt en bepalen daarmee actor afhankelijkheden. Institutionele arrangementen vormen een samenspel met frame interacties en kunnen de randvoorwaarden creëren voor het effectief richting geven aan de brede waaier van frames in het bestuurlijk proces rond klimaatadaptatie. Afwezigheid van institutionele afbakening van rollen en verantwoordelijkheden, kan de *framing game* toegankelijk maken voor nieuwe spelers en kennis, maar riskeert een gratuite proces. In weinig geïnstitutionaliseerde *deliberative governance* zonder centrale coördinatie, is het waarschijnlijk dat frame interacties leiden tot een dominante self-referentiële technische framing die de rol van deskundigen benadrukt en technische oplossingen voorstelt voor ongestructureerde problemen. Deze context kan de voorwaarden opleveren voor wat ik definieer als een politiek omstandereffect in *deliberative governance*. Daarnaast laat ik zien hoe staatstradities een rol spelen in welke institutionele arrangementen welke frame interacties opleveren. Daarom concludeer ik dat institutionele arrangementen in combinatie met staatstradities een rol spelen in hoe de verscheidenheid van frames in bestuurlijke processen in klimaatadaptatie kunnen worden gestuurd.

Deze bevindingen leiden tot mijn belangrijkste aanbevelingen. Ik suggereer vervolgonderzoek voor het beter begrijpen van: (1) het ontstaan van dominante technische frames in *deliberative governance*; (2) de mate waarin deze dominante frames kunnen wijzen op wat anderen *zichzelf versterkende frames* hebben genoemd; (3) politieke omstandereffecten in specifieke combinaties van bestuurlijke arrangementen, beleidskwesties en staatstradities. Mijn belangrijkste aanbevelingen voor beleidsmakers zijn: (1) wees bewust van de verscheidenheid aan frames in bestuurlijke arrangementen, (2) wees bewust van de staatstraditie waarbinnen bestuurd wordt, (3) kies het juiste institutionele arrangement, en (4) wees bescheiden met het depolitiseren van ongestructureerde problemen. In het algemeen, zou mijn advies zijn om klimaatadaptatie voor te stellen als gegist bestek, wat ruimte geeft voor het verklaren van onvoorziene gebeurtenissen, het anticiperen op veranderende maatschappelijke stromingen, en leren door te doen.

## About the author

Since 2015 Martijn works as research fellow in the field of governance for PBL Netherlands Environmental Assessment Agency. From 2010 until 2014 he conducted his PhD research at the Public Administration and Policy group, Wageningen University. He did his research in close cooperation with governmental and non-governmental organizations occupied with governing climate change adaptation. Previously he was research fellow at the Dutch scientific council for government policy (WRR) and worked as programme officer for the United Nations Development Programme. Martijn holds a Master of Science in international land and water management from Wageningen University. During his professional life he completed several courses on policy analysis, and international programme management.

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