

FILLING THE VOID: STRUGGLES OVER IMPLEMENTING FRESHWATER POLICY IN
AOTEAROA NEW ZEALAND

by

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Abstract

This dissertation analyzes how the implementation of environmental policy is shaped by struggles over interpretation. Policy implementation is not a linear or mechanistic process, but is influenced by the subjective interpretation of policy concepts and how those relate to implementation practices. At the same time, however, not all interpretations are equal, and some are more influential than others. While there may be an initial ‘institutional void’ in which many interpretations are considered legitimate, political actors will attempt to structure this void by narrowing down the range of acceptable policy interpretations.

The following chapters investigate how actors attempt to structure the institutional void of policy implementation. Chapter 2 situates the meaning of freshwater policy within historical debates about freshwater and its connection to colonial, biophysical, economic, and regulatory problems. Chapters 3-5 explore how three sets of actors engage in interpretive channelization by crafting and circulating their preferred interpretations of policy concepts in the implementation process. The state uses a diverse menu of regulatory and non-regulatory mechanisms to require and guide local authorities to implement policy in a certain way. Local governments face unique circumstances and must narrate the policy requirements into alignment with the interests of local organizations. Non-state experts such as intermediaries can augment local government interpretations by providing research and technical advice, but can also engage antagonistically by challenging interpretations in court or by using spatial inter-referencing to weaken the power of specific interpretations.

By treating the implementation of policy as amenable to political struggle, a clearer political diagnosis of opportunities and constraints can be conducted. Within each of the channelizing processes described here, both constraint and opportunity exist: even a neoliberal government must respond to public aspirations for water; politicians influence but cannot completely control bureaucrats within the state apparatus; local governments experience

progressive as well as conservative contextual forces; and expert intermediaries can be champions of decolonization and not just advocates of cost-minimization. While the contours of opportunity and constraint will be unique for each policy context, it is crucial to attend to both together if we want to realize environmental justice in practice.

Lay Summary

Across the world, many nations have enacted policies to protect freshwater ecosystems from pollution, over-extraction, and material transformation. Often the implementation of such policies is delegated to the local level, purportedly to reflect local needs and conditions. But does local implementation always secure the intended outcomes of policy? This research follows the implementation of a water policy in Aotearoa New Zealand to see how different actors – the state, local government, and non-state experts – attempt to inject their interests into a flexible policy implementation process. Drawing on 76 interviews with water policy professionals, I show how implementation flexibility is actively struggled over by public and private actors to secure very different environmental, economic, and cultural objectives. By making visible these political struggles, in-depth social research can illuminate how local policy implementation does, does not, or might yet realize the aspirations of environmental justice and sustainability.

Preface

This research project was designed and undertaken by the author, Marc Tadaki. The resulting dissertation is an original intellectual work by the author. The fieldwork for this project received approval from the UBC Behavioural Research Ethics Board, under the project title: 'Structuring the field of environmental governance: tracing the 'collaborative turn' in New Zealand's freshwater management' (certificate number: H14-01509).

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List of Abbreviations

AC	Auckland Council
ECan	Environment Canterbury, also known as Canterbury Regional Council
GWRC	Greater Wellington Regional Council
HBRC	Hawkes Bay Regional Council
Horizons	Horizons Regional Council, also known as Manawatū-Wanganui Regional Council
Iwi/hapū	Iwi are Māori tribal groups who share a common ancestor. Hapū are collections of families which make up an iwi.
National Objectives Framework	Introduced in the NPSFM 2014, the Framework requires regional councils to set quantitative limits for nine biophysical attributes for waterbodies at or above the national bottom line.
NPSFM	National Policy Statement for Freshwater Management - gazetted in 2011, revised substantially in 2014, and revised with minor amendments in 2017.
NPSFM 2011	National Policy Statement – Freshwater Management 2011. Requires councils to set water quality and quantity limits for all waterbodies, based on local and national values.
NPSFM 2014	National Policy Statement for Freshwater Management 2014. Revised version of the NPSFM added the National Objectives Framework and Te Mana o te Wai.

NPSFM 2017	National Policy Statement for Freshwater Management 2014 (Amended 2017). These 2017 amendments required regional councils to measure, report upon swimmability of waterbodies, and create plans to improve swimmability over time. It also required reporting on a new ecological index.
NRC	Northland Regional Council
RMA	Resource Management Act 1991 - New Zealand's principal environmental statute.
Tangata whenua	'People of the land'. Usually refers to the Māori of a geographical territory who identify with that place.
Te Mana o te Wai	'The mana of the water'. Te Mana o te Wai is a statement included in the NPSFM 2014 emphasizing that water is important to all New Zealanders. In the amended 2017 NPSFM, Te Mana o te Wai emphasizes that the purpose of the policy is to ensure the integrated and holistic well-being of freshwater bodies, which includes the values of tangata whenua.
WRC	Waikato Regional Council

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Chapter 1 – Introduction

Prologue

May, 2011. The New Zealand government gazettes the National Policy Statement on Freshwater Management. The policy requires New Zealand's 16 regional councils to set water quality and quantity limits to protect waterbodies from pollution and over-extraction. The limit-setting process must reflect local and national values.

September, 2012. I sit in a workshop in the North Island city of Napier, on the east coast. We are in a conference room of Hawkes Bay Regional Council. I am part of a research partnership with regional council staff, tasked with providing analysis and guidance to support the improvement of water management. We have just had a presentation by a council planner from Canterbury Regional Council (also known as ECan), and the room is abuzz with excitement. ECan, despite having their elected regional council sacked by central government, have proceeded with an ambitious approach to implementing the National Policy Statement. Ten 'Zone Committees' composed of selected community members are charged with setting objectives for waterways, and recommending regulations to council. ECan is the first region to attempt such an ambitious approach to community engagement, and staff from other councils are very interested in how it all played out. By the end of the day, we were no longer talking about ECan and its experiences; we were talking about 'the ECan model'. Despite the fact that the National Policy Statement does not require councils to engage communities in the way that ECan has, the ECan model became a de facto benchmark for implementing the policy.

February, 2016. As a member of the Ministry for the Environment's water policy Implementation team, I attend a Ministry-held workshop about prospective revisions to the National Policy Statement. The purpose is to discuss how ecological 'limits' for freshwater bodies should be defined. The opening presenter flashes a slide on screen. It read '[Um²⁹]' in

the style of a chemical in the periodic table, with the subtitle, 'the element of confusion'. He introduces the motivation for the workshop: New Zealand's 16 regional councils were interpreting freshwater 'limits' differently, and this posed a problem because not all interpretations of 'limits' ensure a basic level of ecosystem functionality.

1.1 Interpreting environmental policy

Using public policies to protect ecosystems is not a simple task. Bound by the constraints of language, policies are open to multiple types of interpretation (Yanow, 1996; Freeman, 2012; Hupe et al., 2014). As the vignettes above indicate, sometimes a new policy term or concept can be interpreted in ways that exceed or subvert the intention of the policy itself. In the case of defining limits, the observed variation in implementation styles was decidedly a bad thing, according to the government officials. In the workshop discussing the 'ECan model' of community engagement, I was fascinated by how excited other council staff were about the idea of collaboration, and how willing they were to promote an explicitly collaborative (as opposed to simply consultative) interpretation of community involvement in their own regions.

It is easy to see how interpretive flexibility in policy implementation can be seen as a bad thing. If environmental policies made in the public interest are interpreted flexibly at the moment of implementation, the policy may not achieve what is intended. For example, if permits for polluting freshwater are 'flexible' and if each new permit application presents a valid argument for use, this flexibility may unwittingly lead to the issuance of more pollution permits than a freshwater ecosystem can sustain. Many political scientists and policy scholars see the creation of government policy as the pre-eminent method of stating and realizing the public interest, as it is made by elected representatives who are accountable to the voting polity (see e.g. Pressman and Wildavsky, 1984; Hill and Hupe, 2014). In this view, interpretive flexibility can undermine the achievement of the public interest as contained

within the policy itself, especially when local interpretations are shaped by unelected actors such as experts or industry lobbyists.

Against a rigid view of policy interpretation, however, many scholars of environmental governance and policy studies have argued that interpretive flexibility can actually make policy more legitimate and effective (e.g. Bulkeley and Mol, 2003; see also Hill and Hupe, 2014). Where a national environmental policy might be perceived as arbitrary, ideological, and unrelated to the interests and livelihoods of local communities (e.g. Scott, 1998), having the ability to interpret and tailor implementation programs to local settings can strengthen the local acceptance and abidance of the policy. It is argued that interpretive flexibility can allow for the incorporation of local knowledge at the point of implementation, better local buy-in, lower costs, and better environmental outcomes (e.g. Margerum, 2011; Holley et al., 2012). Classic studies of policy implementation have even argued that because policies are written at such a high-level, interpretation and judgement are *required* for a policy to realize its own objectives (Lipsky, [1980] 2010).

The debate about the appropriate level of interpretive flexibility in policy is ongoing. Should local governments and implementing actors be allowed to tailor their implementation approaches based on local conditions, livelihoods, and interests? If standardization is required, what form should it take, and what are the costs? Will local flexibility always lead to economic and political elites co-opting the process to secure their interests? My suspicion is that, like many things, the answer to such questions is 'it depends'. Whether interpretive flexibility is good or bad depends upon the specifics of policy and its intent, it depends upon the specific implementation pathways in question, and it depends upon how that implementation pathway relates to the place in which it is being undertaken.

When the National Policy Statement for Freshwater Management was gazetted in 2011, I was intrigued by both its aspiration and its vagueness. On the one hand, the policy was radical in that it required all councils to create and enforce quantitative limits to protect freshwater

ecosystems. This could be a world-leading approach to environmental management. On the other hand, the policy required regional councils to set these limits in ways that they could determine themselves, informed by local values, environments, and needs. I was interested to know: would this interpretive flexibility lead to co-option by local elites and continuing environmental degradation? How would the state respond to this interpretive flexibility to ensure that its favored interpretations were privileged? And finally, how would non-state actors – such as experts and industry lobbyists – shape the way that local governments interpret the policy?

In response to the interpretive flexibility of the National Policy Statement, I wondered whether and how interpretative flexibility might be mobilized toward progressive objectives. For example, can environmental policies be interpreted in ways that strengthen ecological protection, enhance local democracy, and empower indigenous groups? This is not the same as asking how public policies can be *designed* to secure progressive outcomes, which assumes that current politicians in government want these outcomes. My questions are not about policy *design*, but of *implementation*. As the government officials who ran the ‘limits’ workshop in the prologue would surely attest, interpretations can mean the difference between ecosystem sustainability and collapse, or between symbolic and meaningful community involvement in the decision making process. For me, I see the National Policy Statement not as a simple condensation of political-economic interests awaiting mechanical translation into reality, but rather as a text whose meanings and effects are being struggled over in real time. There may be local victories for certain interpretations, there may be state action to control interpretations, and there may be non-state experts who attempt to shape which interpretations are seen as valid or sensible.

This dissertation examines the implementation of freshwater policy in Aotearoa New Zealand, with the aim of understanding how different political actors are attempting to shape the terrain of policy interpretation. Creating and sustaining policy interpretations are tasks that

require ongoing work (Mosse, 2005), the outcomes of which are determined by struggle. Recognizing the consequences and possibilities of policy interpretation can open up a wider field of vision in which environmentalists and others can strategize to affect the processes and outcomes of environmental policy implementation. The struggle for healthy ecosystems, indigenous rights, and local democracy does not – and should not – be considered to end with claiming political government and the writing of policy. By looking at how a recent freshwater policy in New Zealand has been interpreted by state officials, by regional councils, and by a cohort of expert non-state actors, I will show how these actors create their own interpretations of policy and how they seek to influence the interpretations of others. Understanding how policy interpretation happens is a first step toward reclaiming these processes for better ends.

This introductory chapter outlines my theoretical approach, my empirical case study, my methodology, and the argument I will develop through this dissertation. Section 1.2 outlines my principal theoretical framework and associated analytical priorities. Section 1.3 introduces the New Zealand policy context, situating recent freshwater policy reforms historically and then against my research questions. Section 1.4 outlines my research design and methods of data collection. Section 1.5 outlines the structure of the dissertation and the arguments of the individual chapters.

1.2 Opening up the politics of environmental decentralization

The scholarly fields of environmental governance and interpretive policy analysis provide valuable conceptual resources for designing a study of environmental policy implementation. In this section I outline in broad terms what these approaches contribute to addressing the questions I posed in the introduction, and I identify some needs for the future development of these fields.

1.2.1 Environmental governance: a bleak view of institutional transformation?

Broadly speaking, the field of environmental governance is concerned with understanding how environmentally impactful human actions are organized, and how they might be regulated or changed (Lemos and Agrawal, 2006; Evans, 2012; Benson and Jordan, 2017). The concept of environmental governance can be distinguished from a narrower concern with environmental policy, where environmental governance addresses the broad relationships between state, private, and civil society actors (Evans, 2012). While the study of environmental policy design and implementation are urgent research priorities, it is important to situate environmental policy as one mechanism within wider relations of legitimacy, authority, and power that enable policy to be effective at changing the world (or not). Environmental governance scholarship in this vein has drawn attention to several important features of the changing contexts of environmental policy making and implementation.

First, across the world, environmental policy making and implementation are increasingly decentralized. Instead of environmental policies being written and implemented at the national scale, policies are handed down to ‘smaller’ scales of government for implementation (Lemos and Agrawal, 2006; Larson and Soto, 2008; Berkes, 2010; Cohen and McCarthy, 2015). In federalist systems such as the U.S. (Doyle, 2012), Canada (Dunn et al., 2014), Australia (Althaus and Morrison, 2015), and Brazil (Libanio, 2018), for example, this means that policies passed by federal government are required to be implemented by state/provincial governments. Decentralization also applies to other sub-national units such as municipalities, regions, or catchments. Decentralized arrangements can grant new powers to local implementing authorities, but also loads them with new responsibilities; this often occurs without providing any new funding or in-kind resources. How local authorities enact their new responsibilities, and what types of outcomes they achieve, constitute important empirical research questions.

Second, the use of prescriptive regulation as a mechanism of environmental policy is in general declining in favor of ‘soft’ or voluntary approaches (Cashmore et al., 2015; Mol, 2016; Benson and Jordan, 2017; Perkins, 2017b). Such voluntary approaches involve the production of guidance, industry self-governance, and the provision of incentives for undertaking specific environmental practices, but without the compulsion to adopt those practices. Characterizing the state’s use of regulatory and voluntary mechanisms in environmental policy constitutes a second empirical theme of environmental governance research.

Third, as environmental policy is ‘scaled down’ to local authorities, it is also often ‘scaled out’ to involve civil society and private actors (Cohen and McCarthy, 2015). This occurs as new forums and dialogues are created to inform the creation of policy, as well as forums to determine the shape of its implementation (see e.g. Margerum, 2011; Edelenbos et al., 2013). The selective involvement of civil society into the policy making and implementation process constitutes a third empirical theme.

How have critical environmental scholars made sense of these changes in the structure of environmental governance? From a political-economic perspective, scholars have explained these changes as related through the ideological project of neoliberalism which seeks to strengthen the power of economic elites. Here decentralization is often understood as the state ‘rolling back’ its responsibilities for environmental protection; the use of voluntary regulation is taken as evidence of a weakened state captured by economic interests; and scaling out mechanisms are interpreted as methods for legitimating and empowering existing economic interests within a democratic framework (see e.g. McCarthy and Prudham, 2004; Himley, 2008; Castree, 2010; Perkins, 2017a). New forums for stakeholder participation in environmental decision making, for example, have been criticized as being malevolently steered by states and co-opted by local elites to pursue narrow economic agendas (Oleson, 2012; Cohen and Bakker, 2014; Brisbois and de Loë, 2016). Swyngedouw (2010) contends that

such forums are merely efforts to legitimate existing (and inequitable) social and economic arrangements, and that a radical politics through such forums is impossible.

The political story that emerges from these accounts is often quite bleak. Decentralization places burdens on local governments who are either under-resourced to protect the public interest, or who are acting on the needs of economic elites. Novel participatory forums are evacuated of political possibility, not by the process of historical struggle but by *design*. While these critiques of governance changes are generally rigorous and very important, I feel there is also a need to see new forums as open for contest, struggle, and perhaps, victories (however small). If we only describe the negative outcomes of new governance arrangements, and if these outcomes are always predetermined by powerful political-economic forces (which exist in every society), we cede the battle for policy interpretation before it has even begun. There is a need and opportunity, I suggest, to theorize the changing politics of environmental governance in a way that can identify significant powerful forces shaping governance outcomes, while also treating the outcomes of policy implementation as at least somewhat 'open' and amenable to progressive influence through struggle. For this task, I turn to the field of interpretive policy analysis.

1.2.2 Interpretive policy analysis – conceptualizing struggle in environmental governance

The field of interpretive policy analysis is concerned with understanding how policy meanings are constructed and contested, and how these meanings change over time through struggle (Fischer and Forester, 1993; Hajer and Wagenaar, 2003a; Fischer and Gottweis, 2012). An environmental policy, for example, can be examined to identify which and whose meanings and languages are contained within it, whose are not, and what values and nature-society ideologies are given precedent (Hajer, 1995; Hajer and Versteeg, 2005; Dryzek, 2013). Interpretive policy analysis pays attention to how and why communities of meaning-making interpret policies in different ways, where different interpretive styles can bear different

material implications (see e.g. Yanow, 1996; Hajer, 2003a). Rather than treating environmental policies as a simple distillation of societal interests that are destined to realize specific effects, each actor surrounding a policy is an agent capable of interpreting policy in ways that might differ from others (see e.g. Freeman, 2012).

Governance theorist Maarten Hajer's work has been unique in developing an interpretive approach to understand institutional restructuring. Hajer and Wagenaar (2003b) observe that as the state has become more permeable and as policy making processes become more open to the involvement of private actors, policy making is increasingly being undertaken within conditions of institutional novelty, where past relationships of authority no longer hold. Hajer (2003b) argues that novel environmental governance arrangements are often malleable in their purpose and structure, and that environmental actors have the opportunity to shape the norms around their interpretation and use. A new participatory planning forum, for example, may not have established objectives, rules, or responsibilities, yet when such rules are decided they can significantly affect environmental and democratic outcomes. To reflect this sense of novelty and the not-yet-determined nature of new governing arrangements, Hajer coins the concept of an 'institutional void'. An institutional void refers to a situation in which 'there are no generally accepted rules and norms according to which politics is to be conducted and policy measures are to be agreed upon' (Hajer 2003b: 175). Within an institutional void,

actors not only deliberate to get to favourable solutions for particular problems but *while deliberating* they also negotiate new institutional rules, develop new norms of appropriate behavior and devise new conceptions of legitimate political intervention. (Hajer 2003b: 175-176, emphasis in original)

The 'institutional void' concept highlights the conditions of novelty and ambiguity under which governance takes place within a network society (Hajer and Wagenaar, 2003b). The concept describes a condition surrounding policy making that must be accounted for and

explained, rather than providing a complete or predictive theory of policy outcomes. For the purposes of this dissertation, Hajer's notion of an 'institutional void' helps to open up the politics of policy interpretation in two ways. First, the notion of an institutional void provides a sense of political opportunity, in which policy outcomes will be shaped by the type of struggle that unfolds. This emphasizes that the outcomes of new environmental policies or governance arrangements are not necessarily foregone conclusions; there is space for politics. Second, Hajer's concept of the institutional void also draws attention to a distinctive type of political struggle associated with attempts to structure the rules of the game, including 'norms of appropriate behavior'. That is, actors struggle not only to 'win' in a given dispute but to define the norms that govern how disputes are decided into the future. This is a type of politics that is related to – but distinct from – an interest-based view of policy. There is a difference, for example, between arguing for a policy to have stronger environmental protection (interest-based politics), versus arguing for the use of a participatory forum or decision making criterion with which to decide upon the appropriate level of environmental protection. The first type of politics is about the ends of policy (i.e., environmental protection), whereas the second type of politics is about the means to shape how policy is decided. Hajer's injunction to explain recognize and explain the institutional void thus invites scholars to consider how environmental actors use discussions about the *means* of environmental policy to shape their ability to secure their desired *ends*. This insight highlights the role of technical procedures and norms within the decision making process that are argued to be about the means rather than the ends of policy, even though they are in reality about both.

The notion of an institutional void recognizes that new policy objects, institutional configurations, and organizational routines – such as those introduced by an environmental policy – are often malleable and that norms governing these entities will be struggled over by situated political actors. In the environmental governance literature, the institutional void has been used to characterize the malleable character of new policy objects such as biosecurity

threats (Enticott and Franklin, 2009), climate change policy (Wejs, 2014), or ecosystem services (Jordan and Russel, 2014), in which scientists and other policy actors struggle to establish norms of interpretation to guide environmental and risk management. Scholars have also drawn on Hajer's institutional void to characterize the plasticity of emerging participatory governance mechanisms in forestry (Howlett et al., 2009; Kleinschmit et al., 2009), water utility privatization (Beveridge, 2012), and marine governance (van Leeuwen et al., 2012). Such studies emphasize the dynamic unfolding of new governance mechanisms and objects, highlighting how rules of engagement are decided 'on-the-go' (Beveridge, 2012: 48).

To date, the institutional void has largely been used to describe conditions of institutional novelty surrounding a one-off issue, rather than characterizing the interpretive politics of environmental policy in general. The scope of analysis has consequently been limited to the new policy object or governance mechanisms without regard to wider shifts in the distribution of power and authority in the policy regime over time. In this dissertation, I scale up the idea of an institutional void to conceptualize the nature of struggle within a decentralized environmental policy regime that includes multiple waves of policy over nine years (2008-2017) in Aotearoa New Zealand. The institutional void concept is useful for identifying and characterizing the nature of politics and political struggle over these nine years, which includes several policies and whole-of-government reform of freshwater regulation. I consider how the roles of the central state, local government, and non-state intermediaries (experts) are reconfigured through decentralization and how they exercise their new powers to structure the institutional void of policy interpretation for others. In this way, the institutional void refers to more than conditions of novelty, but a regime of political struggle built around the power to interpret policy and to force one's interpretations upon others.

I propose to study the contours of this regime of struggle, attending to key actors and how they exercise agency within conditions of constraint and uncertainty. This analysis will help

to understand the regime of power that emerges as differently-capable actors seek to structure the field of interpretation surrounding multiple new policy objects. This approach advances the study of environmental decentralization by recognizing the emergent and struggled-over character of norms governing new institutional arrangements. It further contributes to the conceptualization of the institutional void, while still prescient, by providing a more precise specification of actors and their interrelationships that can support comparison of scholarship on environmental governance across policy issues and geographical contexts.

The institutional void refers to a condition of policy making, and it was not intended to provide a complete explanation of environmental politics in a network society. The metaphor of a void, for instance, implies nothingness, whereas we know intuitively that concepts will always come from somewhere and someone; there will be existing methods and channels for interpreting new policy concepts across various scales. The term 'void' is thus intuitively limited by its inattention to history.

While recognizing this logical criticism of the void metaphor, I find the concept of an institutional void valuable for highlighting the opportunity for embedded political actors to shape emerging norms of policy interpretation. The notion of yet-to-be-determined norms embedded within the idea of an institutional void provides an important corrective to those accounts of environmental decentralization in which policy outcomes are simply determined by powerful political-economic forces in society. The metaphor of an institutional void may flatten history, but it at least does not reduce the present to the playing out of the past. Thus, in this dissertation I will build the notion of an institutional void into a more robust framework for theorizing interpretive politics. This requires, firstly, recognizing and addressing its historical blindness.

As Peck (2011) observes,

policy ideas, innovations, technologies, and models... do not float freely in some unstructured universe, to be picked over selectively by a faceless elite of continuously learning policy-makers. Rather, the field of policy transfer is itself socially and institutionally constructed, being populated by a wide array of actors and institutions; it is sharply contoured and striated, in the form of shifting landscapes of conjunctural openings and preferred channels; it is structured by relatively enduring policy paradigms, which establish intersubjective frames of reference and institutionalized centers of authority; and, perhaps above all, it is saturated by power relations. (p791)

While the introduction of a new environmental policy might contribute new concepts, arrangements, and practices to the governance landscape, these are not open to infinite interpretation. Rather, new policy ideas flow across an uneven terrain of existing norms, policy meanings, and power hierarchies, where actors are differently positioned to promote and embed their preferred interpretations into dominance. Further this terrain is 'a landscape crowded with existing institutional forms, many with different (and often avowedly nonecological) functions and purposes' (Jordan and Russel, 2014: 193). Environmental politics within an institutional void might be more open than not, but is not completely open; struggle does not play out on an even playing field.

This dissertation examines how a new freshwater policy in Aotearoa New Zealand flows across an uneven terrain populated by local authorities, state, and non-state policy actors who attempt to interpret the meaning of policy concepts in ways favourable to (or consistent with) their objectives. I will examine how actors are leveraging the new institutional arrangements and concepts of an environmental policy to structure the field of interpretation around them, while transforming environmental democracy in the process. My objective is to develop an 'open' account of environmental politics that is attentive to emerging forums and mechanisms of political struggle, with the intention of supporting environmentalists to develop a broader view of the environmental governance system and how environmental

values might be woven throughout its infrastructure. I will operationalize the concept of the institutional void to develop insight into how New Zealand's freshwater governance architecture is changing with the introduction of new policies, concepts, and mechanisms, and what types of politics these changes are enabling. Put simply, I will analyse how different types of actors struggle to influence the outcomes of a new environmental policy. The institutional void provides a metaphor with which to begin this inquiry, and my two analytical priorities for elaborating the institutional void (as an open opportunity and as a mode of struggle) will provide guidance for this endeavour. In the next section, I describe the New Zealand context of freshwater policy and why I think it constitutes a valuable example through which to deploy and elaborate the institutional void concept. I will then discuss my methodology, and how I develop the institutional void concept through the dissertation.

1.3 An experiment in decentralization: freshwater policy reform in Aotearoa New Zealand

Recent developments in environmental policy in Aotearoa New Zealand provide an illustrative setting in which to study how new policy terms are being actively interpreted to advance the objectives of different political actors. In 2011, a major national freshwater policy was enacted that requires implementation by local governments. The ambition and nature of this policy – and the wider reform effort of which it is a part – makes this a valuable case to study how decentralization is changing the structure of environmental politics.

Aotearoa New Zealand (henceforth New Zealand)¹ is a settler-colonial island nation in the South Pacific that, like Australia, remains part of the British Commonwealth. New Zealand has several characteristics of a small European country, with a temperate climate, a population of 4.7 million people (similar to Ireland, Costa Rica, and Norway), an area larger than United Kingdom but smaller than Italy, and a gross domestic product per capita

¹ Aotearoa is the indigenous Māori name for New Zealand, commonly translated as 'land of the long white cloud'.

comparable to South Korea, Japan, Spain, and Italy (IMF, 2017). Unlike many European countries, however, and like settler-colonial nations such as Canada, Australia, and the United States, New Zealand has a recent history of state violence toward indigenous peoples, including murder and the dispossession of indigenous land (King, 2003; Stevens, 2015).

1.3.1 Myths and their contradictions

Globally, outside of its rugby team and America's Cup endeavors, New Zealand is known for its generally progressive social attitudes and green environmental image. The *Lord of the Rings* films (2001-3) played a significant role in showcasing New Zealand's natural landscapes to the world, and the government has continued to brand New Zealand (for tourism and primary production) as 'clean and green', and '100% Pure New Zealand'². International companies now trade significantly on New Zealand's brand in the global marketplace, and the maintenance of this brand has become a significant priority for governments and industry actors (Barkham, 2017).

In recent years, New Zealand has also come into the international spotlight for its approach to restorative justice with Māori (New Zealand's indigenous people). Since 1975, the New Zealand government has used a tribunal to publicly document and evaluate the colonial state's historical crimes against Māori, and recommend recompense based on the nature of the grievances (see Sullivan 2016). Recently, this has involved recognition that governance powers over land and water resources should be shared. Several Māori iwi (tribes sharing a common ancestor) have been given shared authority over water management based on principles – including indigenous principles – negotiated between Māori and the government. In 2016, The New York Times published a story titled *In New Zealand, lands and rivers can be*

² See, for example, this government-created advertisement from 2017:

<https://www.youtube.com/watch?v=d3WXJQoPSS4>

people (legally speaking) (Rousseau, 2016), and in 2017 The Guardian ran an investigative article titled *New Zealand river granted same rights as human being* (Roy, 2017). Much popular and scholarly attention has since been paid to understanding the potential environmental and legal implications of granting the Whanganui River the status of legal personhood in 2017 (Boyd, 2017; Kothari et al., 2017; Rodgers, 2017; Smith, 2017; Sutherland et al., 2017; Charpleix, 2018; O'Donnell and Talbot-Jones, 2018).

As with most myths, while there is some truth to these stories, there are contradictions, qualifications, and tales not told. In fact, New Zealand's freshwater estate has been degrading for decades as a result of agricultural land use intensification and urban development (MfE and Stats NZ, 2017), a reality that Māori and environmentalists have been highlighting for a long time (Knight, 2016). It has taken many scientific studies, several State of the Environment reports, many visible ecological crises, and (perhaps most effectively) continuing negative evaluations by the Organization for Economic Cooperation and Development for freshwater to be placed onto the national policy agenda (Knight, 2018). Prior to 2008, successive governments from the left and right consistently failed to meaningfully confront and address freshwater degradation, despite increasing public concern.

New Zealand's social and economic fabric is also shaped by historical colonialism and structural inequality. As New Zealand opened its trade markets in the 1980s and 1990s, the infamous fourth Labour government (1984-1990) radically reorganized the government bureaucracy and enacted social, economic, and environmental policies based on neoliberal philosophical principles, most of which were happily embraced and embedded by the following fourth National government (1990-1999). It is widely understood that New Zealand's experience of privatization and the marketization of (previous) state functions was perhaps one of the most intense experiences of neoliberal reform across the Western world (Goldfinch, 2000; Peet, 2012). Jane Kelsey (1995) evocatively referred to these reforms as

‘The New Zealand experiment’, which became a global model for neoliberal programs and strategies across the world (see e.g. Kingfisher 2013).

With respect to Māori, while the 1840 Treaty of Waitangi (Te Tiriti o Waitangi) promised Māori full control over their land and resources, successive laws and policies by left- and right-wing governments have not addressed the economic and environmental rights of Māori. Although Treaty settlement legislation has created new local governance relationships between Māori and central and regional governments, these settlements have not acknowledged – as the Waitangi Tribunal has explicitly clarified – that Māori were guaranteed proprietary rights by the Treaty (see Ruru, 2013; Strang, 2014). The Whanganui River settlement, which creates a new decision making body and novel decision making mechanism, may provide unique local opportunities to improve the health of the river and foster an ethic of kaitiakitanga (guardianship) (Hikuroa et al., in review). However, the settlement does not affect property relations within the catchment – either for land or water – and time will tell how much power the new governance entity actually has to shape catchment land use. Thus, although progressive Treaty settlements such as the Whanganui River settlement may create opportunities for governance steering and strategic activism in the future, as yet Māori remain limited in their ability to direct freshwater governance and improve health outside of a few select catchments. New Zealand’s regional authorities still retain most authority and responsibility for the operational management of freshwater in Aotearoa New Zealand.

1.3.2 A decentralized freshwater policy

In response to increasing public and economic concern about New Zealand’s environmental reputation, in 2011 the centre-right fifth National government (2008-2017) enacted the National Policy Statement on Freshwater Management (New Zealand Government, 2011). This policy requires regional authorities to decide upon ecological limits for water pollution and extraction, and to design and implement plans to achieve these limits. Instead of setting

national ecological limits to water and land use, the government took a decentralized approach, arguing that local environmental differences and community values needed to inform regionally-tailored implementation. Since the policy was enacted, regional authorities have used a range of approaches to elicit the preferences and values of their communities and operationalize them through planning mechanisms (see MfE, 2017e). Despite central government officially devolving responsibility to regional authorities, central government has actively steered the policy implementation process through a comprehensive program of implementation support, coupled with targeted revisions to the policy in 2014 and 2017. Non-state actors such as agricultural industry lobbyists and environmental organizations have also engaged with the implementation process, employing a range of strategies to champion preferred policy ideas, affect central government priorities, and determine regional environmental planning rules. In these ways, the New Zealand experience offers a uniquely valuable case of a policy being enacted within an institutional void, where norms are not yet clear and hence become the object of political struggle in an uneven terrain.

1.4 Methodology

The institutional void refers to a set of conditions under which environmental policy and governance are practiced, and indicates two priorities that can guide analysis of environmental politics (institutional void as an open opportunity, shaping norms as a distinctive mode of struggle). To operationalize these priorities into a conceptual framework with empirical applicability, some structure is needed. The selection of key entities (e.g. political actors, policies) can help to focus and bound inquiry, as will the delimitation of the spatial scale at which emerging norms of interpretation might apply. I have chosen to examine how a specific policy – the 2011 National Policy Statement on Freshwater Management – has enacted new concepts that local authorities across New Zealand must interpret and implement. Since this national policy applies to all regions, all local authorities within New Zealand are potentially subject to the norms that emerge in relation to this policy.

My research design focuses on a specific type of actor within the environmental policy system, what Larner and Laurie (2010) call ‘middling technocrats.’ These are actors with significant but constrained (i.e., middling) levels of autonomy, who rely upon and cultivate a sense of expert identity (i.e. technocrat). I am interested in how these actors exercise their autonomy and leverage their expertise to argue for specific interpretations of environmental policy concepts and objectives. The landscape of environmental governance is populated with many middling technocrats; these actors attempt to achieve political objectives not (or at least not only) through claiming to represent some interest in society, but by having technical knowledge that precedes or transcends conventional democratic politics (Prince, 2016). For example, in deciding how to structure a collaborative process with local stakeholders to decide freshwater limits, middling technocrats within a council might make consequential decisions about the criteria for inclusion of participants and the sequencing of deliberations. Here, middling technocrats draw on expert knowledge (e.g. social science, organizational experience, or legal argument) to justify a particular course of action regarding the *means* of environmental decision making. My interest is in how middling technocrats across New Zealand’s resource management system craft and promote interpretations of environmental policy to secure their objectives.

My approach can be characterized as a multi-sited interpretive analysis of policy implementation. In her book *How does a policy mean?*, Yanow (1996: 19) argues that the policy process is at its core ‘a struggle for the determination of meanings.’ To study this struggle empirically, one must identify key ‘symbol-sharing communities’ (p20) who interpret policy concepts through a shared lens. I have chosen to focus my analysis on the decisions and actions of three sets of actors: the national state bureaucracy, local governments, and a subset of non-state actors that I call intermediaries. The central state enacted the policy, has vested interests in its implementation in a specific way, and it also has diverse means at its disposal to promote its favored interpretations. Local governments are charged with implementing the policy, and thus must translate policy concepts into the logics

of local planning and operational rules. Intermediaries such as researchers, consultants, and lobbyists cultivate and leverage their policy expertise to generate and promote favored interpretations of national policy for implementation by local governments, making them a significant type of actor in the struggle to shape the emerging norms of policy interpretation. Not all members of civil society possess such expertise and can engage in policy debates and court battles over the proper (or most legally defensible) interpretation of policy. I am interested in how intermediaries (expert actors outside the state) engage in debate about the proper interpretation of policy. By tracing the ways these three sets of actors attempt to shape interpretations of freshwater policy concepts, I ‘follow the policy’ (Peck and Theodore, 2012) across its distal sites of meaning-making and reinterpretation. I focus on how these actors understand the policy and how they then attempt to shape its meaning as perceived by others.

1.4.1 Methods and data collection

This dissertation examines three sets of actors as they attempt to shape the meaning of policy concepts through the implementation process. To understand the activities of the state, I spent time within the Ministry for the Environment’s water policy implementation team and interviewed state bureaucrats. To understand local government interpretations of the policy, I selected five regional councils and interviewed key bureaucrats responsible for implementing the policy. To understand the practices and strategies of intermediaries, I sought out veteran resource management professionals who have experience making and evaluating claims for the interpretation of policy in Environment Court and resource management hearings.

My primary data are drawn from 76 semi-structured interviews with 63 embedded policy actors. The interviews lasted between 20 and 90 minutes, averaging around 50 minutes in length. Interviews were triangulated with historical and contemporary policy documents, with other interviews, and participant observation. Interviews provide a way to allow participants – the policy actors – to draw attention to key relations and reasons driving their

policy activities. Interviews also provide a way to understand, in retrospect, key causes of outcomes.

To provide an overview of political positions surrounding the National Policy Statement for Freshwater Management, I interviewed three then-opposition members of parliament – David Parker (then-Labour Party spokesperson for water, former and now current Minister for the Environment), Eugenie Sage (then-Green Party spokesperson for resource management, current Minister for Conservation) and Catherine Delahunty (then-Green Party spokesperson for water, now retired). While I approached the office of then-Minister for the Environment Nick Smith for an interview, I was referred to speak to an MfE official instead. To hear the Minister speak about the National Policy Statement I attended two public meetings – in Nelson in 2016 and Wellington in 2017 – at which Smith presented his proposed policy amendments and fielded questions from the public. From these interviews and public meetings, I sought to construct a broad diagnosis of the freshwater problem in New Zealand, how these actors thought the National Policy Statement addressed this problem (or not), and what they thought was needed now and into the future.

1.4.1.1 Interviews and participant observation - state bureaucracy

Through investigating the implementation activities of the state's environmental bureaucracy, my aim is to identify how state bureaucrats interpret the government policy, how bureaucrats attempt to promote these preferred interpretations, and whether these activities can be simply explained by hierarchical translation of the political ideology of the Minister.

To access the state bureaucracy, New Zealand's Ministry for the Environment (MfE), I leveraged contacts from an earlier research project to contact MfE water policy officials. We negotiated a five-week (25 working days) stay for me within MfE's water policy Implementation team over February-March 2016. During this period, I produced a desktop

literature review on the future of collaborative governance for freshwater. I was inducted through a formal process and introduced to the entire Water Directorate (the department within MfE conducting water policy work). I participated in weekly team meetings, Water Directorate meetings, and MfE-wide meetings. The eight members of the implementation team signed a consent form recognizing my presence and my intention to take anonymized notes on my experiences (see Appendix 1). With MfE management I negotiated a confidentiality agreement giving them the right of review and veto power over confidential material. They have not redacted any material from this dissertation.

I spent another ten days with the implementation team in August 2016, and five days in March 2017. Within these three periods of time in MfE, I solicited interviews with officials in the implementation team, the Water Directorate, and MfE leadership. I ultimately conducted 40 interviews with 28 individuals; some officials I interviewed multiple times to consider changes and developments in policy. Interview questions were tailored to draw on the unique experiences of the interviewee. After discussion the individual's background and history of professional work (including MfE), I would ask them to describe their current projects, how choices around these projects were prescribed, and through what means. We also discussed the rationale and work of different teams within the Water Directorate, the design and effectiveness of the National Policy Statement, and what they saw as key challenges for implementation. The purpose of these interviews was to compose a broader sense of how MfE and its officials imagine their specific projects and wider work programs, and how they imagine these activities are affecting the implementation of the National Policy Statement.

All interviewees signed individual consent forms permitting me to quote them without identification (see Appendix 2). I also accessed project documentation that helped me understand the development of the Water Directorate and previous (or unfollowed) directions in water policy. However, I am unable to quote from this material because it is confidential.

Being physically present within the Water Directorate made it easy for me to meet officials, describe my work to them, and flexibly schedule (and reschedule) interviews. Receiving a keycard and being co-located in the building indicated that MfE managers approved of my presence, which likely make Ministry officials comfortable and willing to speak to me. Most officials were willing to share stories, discuss projects, and praise (and gripe about) different aspects of life in the Ministry. Surprisingly, almost everyone I asked agreed to an interview, including several managers and the chief executive of MfE.

1.4.1.2 Interviews - regional council bureaucrats

By characterizing the local implementation activities of five regional councils, my aim is to examine what types of interpretations have been used for concepts within the National Policy Statement, and how these interpretations can be significant for environmental and democratic outcomes.

I solicited interviews with regional council staff from five regional councils: Northland, Auckland, Waikato, Wellington, and Hawkes Bay. As will be explained further in Chapter 4, I sought variation across five dimensions:

- Pressures on freshwater: from urban development (Auckland) vs. agricultural intensification (Waikato)
- Māori settlements with the Crown (government): complete and strong settlement (Waikato) vs. incomplete settlements and capacity issues (Northland and others)
- Water-related controversy: Pre-existing freshwater conflict (Waikato, Hawkes Bay) vs. freshwater as a relatively new public priority (Auckland, Wellington)
- Dominant land use: Intensive urban (Auckland, Wellington) vs. largely rural (Northland, Hawkes Bay)
- Resourcing and institutional capacity: High (Auckland, Wellington) vs low (Northland) vs. medium (Hawkes Bay, Waikato)

All five chosen regions are in the North Island, which presents a limitation to my study. As I discuss in Chapter 4, I decided against studying Canterbury – the most populous South Island region – because of its unique and already much-studied governance arrangements (e.g., Holley et al., 2012; Nissen, 2014; Thomas and Bond, 2016; Kirk et al., 2017; Jenkins, 2018). While I considered studying Tasman District Council from the South Island, I decided to follow the advice of colleagues from MfE and several interviewees, who recommended that the five regions I used as case studies were sufficiently representative that they would provide valuable insight.

During August and September 2016, I interviewed four staff from each of Northland, Waikato, Hawkes Bay, and Wellington regional councils, and from Auckland Council I spoke to five staff plus one consultant. In March 2017 I updated my conversation with one participant from Auckland and interviewed an additional Auckland consultant. To ensure some consistency across regional councils, I sought at least one scientist and at least one policy manager from each council. As each council has a different organizational structure, staff roles are not always equivalent, but this at least ensures I have talked to the person ‘in charge’ of implementing the National Policy Statement in each council. For Auckland, Hawkes Bay, and Waikato, I previously had met relevant water policy staff through the Regional Council Forums of the Freshwater Values, Monitoring and Outcomes research program (2010-2016), which supported my masters research in 2011-12 at the University of Auckland. For Northland and Wellington, I pursued contacts through colleagues from MfE’s implementation team, who vouched for my professional integrity and the value of my work.

In addition to the limited representativeness of my selection of North Island regions, my approach has two further limitations. The first is the small number of interviewees from each council (~4). It would have been more robust to speak to 6-10 people from each council, or to interview additional people until I saturated my accounts of freshwater policy implementation within a council. The primary constraint for me was logistical: I wanted to

prioritize breadth over depth, to canvas diversity across five regions in some detail rather than understand one or two regions in rich depth. This means that my accounts of these regions' experiences are not representative of all perspectives on the policy process within a council. Another limitation is that I limited my focus to council bureaucrats rather than local stakeholders, elected councilors, Māori, and other actors. To conduct an interest-based analysis of policy implementation with all major stakeholders for five regions would require many researchers over several years. For my single PhD project, I have focused on the role of bureaucrats as key political actors who structure the nature of local implementation programs in significant ways, based on expert knowledge and technical arguments. This question of how decision-processes are structured would benefit from, but does not require, a comprehensive analysis of all stakeholder perspectives.

Altogether I conducted 24 interviews with 23 regional implementation actors, consisting of 21 council bureaucrats plus two consultants. Interviews with council staff were tailored to the expertise of the interviewee, the region in question, and my relationship with the participant. Overall, they followed the same broad structure: after discussing the interviewee's background and experience with freshwater policy implementation, I asked how their council had chosen to interpret the National Policy Statement in specific terms and why that interpretation was selected. I asked about the detail of their implementation programs, and invited interviewees to indicate significant place-based challenges and opportunities facing the council and their chosen approach to implementing the policy. Through this approach, I invited participants to describe and explain the unique features of each region's implementation approach, allowing me to see how much variation exists in implementation. It also allowed me to see how local government actors can exercise agency in the construction of implementation alternatives.

1.4.1.3 Interviews - water policy intermediaries

The decentralized implementation of a new environmental policy generates new opportunities for non-state actors to inject their values into the policy process by crafting, circulating, and promoting favored interpretations of concepts and objectives. I explore how a specific type of expert non-state actor – intermediaries – can affect the interpretations and implementation of policy. Intermediaries are involved in translating interests – for instance of an organization, or themselves as individuals, or the environmental public good – into the languages and rationalities of New Zealand’s resource management system. An intermediary could be a lobbyist or lawyer on-staff within an agricultural organization. They could be a public-interest lawyer, a university scientist, a management consultant, an iwi (Māori tribe) resource manager, or a social scientist. These actors are intermediaries because they are attempting to translate – or intermediate – between some interest (whether public or private, individual, organizational, or collective) and public policy (Moss et al., 2009). They might work for a formal stakeholder organization, such as an industry or environmental group, or they might justify their interventions based on their expertise on technical aspects of policy effectiveness or legitimacy (e.g. as social or natural scientists). Put simply, intermediaries are non-state actors who make formal arguments about how the National Policy Statement should be interpreted. While environmental and industry organizations may argue for policy *change* in the public arena, they can also act as intermediaries by constructing arguments about the appropriate implementation of an *existing* policy.

I sought a sample of intermediaries to gain a sense of how intermediaries were engaging with these processes to shape implementation outcomes. My first strategy was snowball sampling. Drawing on my existing networks with research colleagues and regional and central government officials, I sought out seasoned veterans of national and regional freshwater politics who could explain how the resource management system worked in local settings, and especially how local policy implementation activities were influenced – both intentionally and unintentionally – by non-state experts. Since environmental organizations were ‘closer’

to my relational networks of environmental research, I made an additional effort to interview industry organizations. I requested interviews from three of the most prominent agricultural organizations in freshwater policy advocacy: Dairy NZ, Federated Farmers, and Fonterra. I secured an interview with a Federated Farmers spokesperson, the Dairy NZ spokesperson was called out to a court hearing on the day of our interview, and Fonterra did not reply to my communications. While interviews with more industrial and other types of intermediaries would have benefitted my study, my sample is sufficient for an exploratory – rather than representative – analysis of intermediaries. Since my aim is to identify *some* strategies of intermediaries and consider their implications for environmental politics, it is not my purpose to claim representative coverage of *all* intermediaries. I am concerned with identifying and analyzing some of the significant logics and tactics that intermediaries deploy to alter the terrain of policy interpretation.

I conducted 13 interviews with 11 intermediaries, though this number is somewhat arbitrary:

- Consultants (3)
- Policy researchers (3)
- Environmental organizations – Fish and Game (1), Forest and Bird (1), Environmental Defence Society (1)
- Land and Water Forum secretariat (1)
- Industry organization – Federated Farmers New Zealand (1)

This number includes the Auckland-based consultants mentioned previously, and it excludes the many central and local government officials I spoke to who have worked as intermediaries previously (or who currently do now). Because intermediaries come from a range of backgrounds and occupy different roles, interview topics were tailored to individuals. For some interviewees, questions addressed the historical development of New Zealand's resource management system and how that system failed to protect freshwater

quality nationally. For other interviewees, questions addressed contemporary projects and how those projects connected to regional implementation programs.

1.4.1.4 Document analysis

Interviews have been triangulated and contextualized through close reading of and reference to historical and contemporary policy documents, as well as a critical analysis of the academic and practitioner literature on New Zealand freshwater policy. For historical context I focused closely on debates about the design and implementation of New Zealand's Resource Management Act 1991, especially in relation to freshwater and diffuse pollution. To characterize more recent developments, I analyzed contemporary policy documents produced by successive government ministries on freshwater policy, examined State of the Environment reports and scientific studies of freshwater degradation, and the plethora of reports advising the government on freshwater reform since 2008. Since the start of my PhD in 2013, I have also collected online news articles relating to freshwater in New Zealand, and this material informs my analysis of freshwater politics in public and political discourse. Many of these documents are cited throughout this dissertation.

1.4.2 Reflections on limitations

My research focuses on the work of bureaucrats in central and local government, and professionals from the environmental, consultancy, industry, and research sectors. My motivation was to identify and analyze the politics of the interpretive work that these policy actors do. As with any research project, I could not study everything, and while I have laid out my reasons for my choices above, it is worth reflecting on the limitations to my research in relation my study design, my sampling, my positionality, and, most broadly, my Western worldview.

1.4.2.1 Study design

My research design focuses on the middling technocrats who craft policy interpretations from positions within central and local government as well as from organizations outside the state. My study was not designed to systematically evaluate the five local implementation programs I examined. Such a study would likely require a full PhD focusing on one or two regions to develop saturated accounts of local policy implementation processes, including interviews with more council staff as well Māori and stakeholders participating in those processes. Since I wanted to compare the implementation across more than two regions, in addition to investigating the interpretations promoted by the state bureaucracy and a sample of intermediaries, I sacrificed depth for breadth at the local scale, speaking to at least four officials from each regional council. It is possible that because of this sampling my accounts of the motivations and logics of local policy approaches are skewed in favor of the participants I spoke to. However, through a processes of triangulation with policy documents as well as with MfE officials and other intermediaries, I have confidence that my local accounts as robust. Furthermore, I do not attempt to claim that the overall processes were ‘good’ or ‘bad’ for different interests. I merely seek to investigate how decisions about the structure of policy implementation can be imbued with different substance based on the motivations of these actors. Into the future, in-depth local accounts of water policy implementation would provide a much richer description of the local and historical politics of these processes, enabling a more detailed understanding of the motivations at play and the meanings of local policy languages and practices.

Additionally, it is worth clarifying that my approach to intermediaries is exploratory and not representative. I am interested in how intermediaries distil political objectives (whatever their source) into the languages and logics of policy implementation. My study is not designed to survey or represent all intermediaries in New Zealand. My focus is on understanding *how* (some) intermediaries work relative to state actors; I do not require complete representation of all intermediaries or all stakeholders to achieve this task. That said, a next step from the

analysis developed here would be to catalogue the strategies undertaken by intermediaries according to their named stakeholders or interests. Such an analysis might explicitly investigate specific interests or stakeholder groups, such as local or national Māori collectives, pastoral and other types of agricultural interests, recreational associations, environmental groups, and so on. A fuller characterization of freshwater stakeholders across local and national scales, along with the strategies of their associated intermediaries, would make a valuable contribution to scholarship on New Zealand environmental politics.

1.4.2.2 Sampling

My selection of interviewees was guided by my existing relationships; this affected the nature of the stories I collected. While my physical placement within MfE constrained me to seeking out people who were still working within the building, my institutional situation (e.g. ability to book rooms, MfE email account) allowed me to freely snowball within MfE to search for those who had worked on water policy and implementation to the point where I felt I had reached saturation in relation to the implementation work. Within the regions, I engaged in stratified sampling (as described above) to ensure that I spoke to the relevant policy manager, a relevant scientist, and the key bureaucrat/s driving the implementation work. Thus for both MfE and regional councils I am comfortable that my sampling strategies have generated the most relevant insights possible for my research questions, even though I could have spoken to more people than I did.

For intermediaries, I did not engage in stratified sampling, and the population is not physically concentrated in a building to allow me to easily snowball. My approach here was exploratory, beginning with my existing networks. Drawing on networks from a six-year research project about freshwater management (2010-2016), I first sought out expert intermediaries with >20 years of experience in the environmental sector who could explain the work and strategies of non-state actors such as intermediaries within the resource management system. From this core group, I snowballed out to find other veterans with

different geographical and institutional experience of freshwater management, such as experiences with past court cases, for example. I knew I wanted to speak to researchers as well as consultants, and environmental as well as industry intermediaries. Within my existing networks I accessed researchers, consultants, and environmental intermediaries, but I knew few industry intermediaries so I made explicit approaches to invite them for an interview. Since my study of intermediaries is exploratory, stratified or representative sampling was not required. If my sample of intermediaries were biased toward particular interests or perspectives, this does not negate the value of studying how these interests are translated into the policy interpretations. I recognize, however, that my exploratory analysis could be improved upon in the future by seeking out a stratified sample of intermediaries (as described above).

1.4.2.3 Positionality

Finally, I acknowledge that my emphasis on bureaucrats and experts is both theoretical and political. Peck and Theodore (2012) warn that researchers must maintain a critical distance from their research subjects, lest they become ‘dupes’ (p27) of the policy ideas and communities being studied. One of my motivations for undertaking this research was to tell the (largely untold) stories of environmental bureaucrats currently working in councils, the state bureaucracy, and as intermediaries. I wanted to make their politics visible so that they can be recognized and valued by others. While conducting my research and analysis I have been aware that policy workers may act in self-interest, as well as recognizing that policy workers’ actions may be determined by forces beyond their control. In this, I have attempted to scrutinize self-serving claims, while also remaining aware that policy actors are acting within constraints that are not always revisable. It could be argued that I have been ‘duped’ into thinking these actors and their policy ideas matter and that their intents and effects are positive for the environment and democracy. In response to this, I can say three things. First, I have made my motivations and intentions explicit to allow others to see and criticize my reasoning. Second, I have attempted to triangulate the accounts provided to me wherever

possible, and I do not equate intention with effect. Third, I have made a systematic effort in every chapter to highlight the constraints within which these actors must work.

1.4.2.4 Western worldview

My approach to studying freshwater governance is grounded in a Western social science framework that takes for granted the existence and importance of certain social and material actors and objects in the world, such as the bureaucracy, water chemistry, or ‘scientists’. A perspective grounded in Te Ao Māori (broadly translated, ‘the Māori world’) might have focused on different issues and political arenas, regarding different objects and relationships (such as rivers-as-ancestors), and with a different normative lens (see e.g. Harmsworth et al., 2016; Ruru, 2018). As a non- Māori scholar interested in Western institutions of freshwater governance, I have posed policy-related questions that I feel are important, and which I feel competent to answer. It is important to acknowledge, however, that an environmental politics grounded in Te Ao Māori is urgent and has significant potential for enhancing prospects for environmental justice and ecological sustainability. I hope that my research might align with indigenous freshwater politics by, firstly, offering a way of understanding how interpretations of Māori concepts might be struggled over within Western institutions, and subsequently, illuminating how progressive translations of such concepts might be promoted by Māori from different vantage points across the environmental governance landscape.

1.5 Argument of the dissertation

This dissertation provides an empirical exploration of the politics of interpretation within New Zealand’s emerging limits-based system of freshwater governance. I am chiefly concerned with identifying where politics is to be found within this regime, and how it is being conducted. How is the institutional void being engaged by different actors who seek to advance their interests through securing favored interpretations of policy? I focus on the role of state, local government, and intermediaries as they attempt to structure the preferred *means* of this new regime, to consider how these also privileges certain *ends* (Hajer, 2003b). I

describe what activities these actors undertake to interpret the policy, why they undertake them, and what these activities can tell us about where political agency exists within these new arrangements.

I will argue that the struggle to shape the limits-based regime in New Zealand can be called epistemic politics (Alasuutari and Qadir, 2014). This type of politics involves contest over the definition, meanings, and practices associated with new policy concepts. Epistemic politics constitutes a distinct domain of politics that functions differently to struggles over the content of policy. On the one hand, one might critique epistemic types of politics as elite-centric and technocratic and seek to reject it in all of its forms. On the other hand, 'Rather than [simply] criticizing these forms of politics for their lack of accountability and their often troublesome relationship to decision making in elected bodies we might also try and figure out how we can build on their success and enhance their democratic credentials' (Hajer, 2003b: 190). We need to grasp the politics of interpretation if we are to engage it consciously and collectively. By explicating and interrogating these politics of interpretation, I hope to support environmentalists to think more holistically about how the political struggle can be waged even without the levers of political government.

As a theoretical contribution, the chapters of this dissertation revise the institutional void concept to analyse epistemic politics in environmental governance. Hajer's concept of the institutional void provides some useful starting points but is incomplete as a guide for theoretical and empirical inquiry. Consider, for example, that the metaphor of an institutional void seems to neglect both history and power. We know intuitively that all concepts come from somewhere and someone; there is no such thing as a policy or governance reform that is completely 'new' or whose concepts do not have at least initial form in the world. In this way, an initial task for analysis is to identify the historical origins of policy concepts, and to situate these concepts within the political strategies of different groups and interests (Chapter 2). Once we recognize that the institutional void is already somewhat preconfigured,

this opens up the prospect of geographical variation. Do different regions encounter slightly different regional institutional voids, where certain actions are easier or more difficult (Chapter 4)? A related task is to consider how differently powerful actors are attempting to structure the institutional void by promoting their own concepts and norms into positions of dominance. Chapters 3 and 5 do this for the state and for intermediaries, respectively.

Within each chapter, I draw upon selected theoretical perspectives on the state, on policy implementation, and experts, to develop a framework for understanding how differently situated actors work in concert and in competition to structure the void of policy meaning. While there are many possible literatures and theoretical traditions I could draw on to understand the actions and intentions of these actors, I focus on those theoretical traditions that help me locate and characterize agency within the policy implementation process. I do not provide a full theorization of the state, for example, from a full range of interpretative and political economic traditions. Instead, I focus on a key axis of debate within the state theory literature regarding the value of insider accounts for problematizing the 'state' as a coherent interest or entity. I use that debate to guide my analysis and help me to connect each chapter back to the wider argument of the dissertation.

1.5.1 Structure of the dissertation

Chapter 2 places New Zealand's new policy concepts within historical context to consider their intended meanings and lines of conflict around them. I argue that the concepts contained within freshwater policy – as with any policy – make specific conceptual and linguistic interventions into historical struggles over authority and the categories and logics of governance. Drawing on document analysis and interviews with resource management practitioners, I describe the emergence of four key concepts that crystallize decades of political debate in New Zealand: limits, collaboration, rights and interests, and values. By understanding how the National Policy Statement crystallizes specific interpretations of these

concepts, we can understand how the institutional void is prefigured and why dissenting actors might seek to champion alternative interpretations of specific policy concepts.

Chapter 3 examines the efforts of the state bureaucracy to structure the institutional void of policy implementation. The state remains one of the most powerful actors to affect policy meanings, so state attempts to steer other actors toward certain interpretations of policy concept merit identification. Drawing on interviews with MfE officials and on my experience within MfE, I describe the projects of the freshwater policy implementation team, the rationale and work of the Water Directorate in relation to the National Policy Statement, and the priorities and projects shaping MfE as an organization. Across these organizational scales, the work of Ministry officials is shaped by multiple logics that are not reducible to the ideology of the Minister or the government of the day. Even those putatively ‘neoliberal’ implementation projects – such as state support of economic valuation – can and should be analyzed for their diversity and polysemy. While the state does engage in structuring the institutional void through a range of programs, the form and purpose of state activities can be affected in significant ways by bureaucrats drawing on organizational, professional, and personal rationalities and values. Rather than rejecting the state as a conduit through which to seek environmental sustainability and social justice, as some have recently advocated (Pulido et al., 2016), I argue that a serious engagement with the practical logics of bureaucratic work can open up space for thinking about where and how environmental and democratic values can be woven through the state apparatus.

Chapter 4 explores the geographical constitution of the institutional void by analyzing how five regional councils have implemented the National Policy Statement for Freshwater Management. Not only is the institutional void at least somewhat pre-structured by historical meanings, it is also felt differently by different actors across space. Implementing regions do not all face the same conditions of political possibility; their policy implementation pathways are channeled by local politics and organizational priorities as well as local histories of

conflict and environmental change. Drawing primarily on interviews with regional council staff (and a few consultants) from five regions, I identify the local logics of policy implementation within the terms of the regional council actors who assembled them. My aim is to determine whether and how these regional policy actors make decisions that are consequential for the shape of implementation programs. If they do – and I contend that they do – this has implications for understanding who has what kind of power in a decentralized environmental governance regime. By describing five implementation programs and explaining their origins and logics, I hope to explicate how local government bureaucrats can and do act as environmental democratic change agents in this decentralized regime.

Chapter 5 considers some ways in which intermediaries are attempting to structure the institutional void. By developing and promoting certain policy concepts and frameworks, intermediaries are shaping the landscape of freshwater policy implementation. Drawing on interviews with intermediaries and supported by a review of related technical, scientific, and policy documents, I describe several mechanisms through which intermediaries are attempting to structure regional councils' implementation plans. First, I describe how a scientific model – Overseer® - has acquired preferred status for implementing the concept of 'limits', even though many industry and government actors are now trying to rein in its influence. Second, I show how the notion of Good Management Practice offers a regulatory alternative to Overseer® which privileges certainty of economic cost over certainty of environmental protection. Both approaches involve the concept of 'limits' which is specified in the National Policy Statement, yet they produce different distributive outcomes. Third, I consider how social and policy researchers are developing and promoting best practices in relation to Māori 'rights and interests' and 'collaboration'. Fourth, I describe how intermediaries re-compose their spatial knowledge and experiences of different settings to advocate for preferred policy elements within a place. I argue that through all of these spatial strategies, intermediaries are attempting to structure the void of policy implementation, and as non-state actors their influence deserves further and ongoing analysis.

Chapter 6 summarizes the theoretical contributions of the dissertation and distils what might be learned for New Zealand and international environmental policy communities. After revisiting the contributions of each chapter to a broader theorization of environmental decentralization as a structured terrain of interpretation, I offer some learnings for other decentralizing states, and I suggest some future research directions. A discussion of the recent New Zealand election and freshwater policy developments post-2017 is included in a postscript.

Through this dissertation, I revise the notion of the institutional void into a conceptual framework that can be used to characterize and analyze how key actors are engaging in epistemic politics. While the metaphor of a void usefully draws attention to the somewhat open nature of political outcomes through the process of struggle to shape interpretations, it does not systematically grasp how interpretive politics are structured by history, by the state, by local context, and by non-state actors such as intermediaries. The chapters of this dissertation demonstrate how the institutional void alluded to by Hajer is not without structure and power dynamics. Indeed, a more accurate metaphor for understanding the dynamics of epistemic governance might be ‘terrain’ which draws attention to the historically channelized, yet constantly weathered and changing landscape of meaning in environmental politics.

Chapter 2 – From public concerns to state policies: a history of New Zealand freshwater policy

2.1 Introduction

At a basic level, an environmental policy can be understood as the state's response to historical public concerns. Public concern might arise over degradation of a particular ecosystem or in relation to particular economic practice, for example, and the state responds by creating a policy to address that problem and secure the state's legitimacy to govern (Whitehead, 2017). However, state policies are not neutral responses to public concerns. (Fischer and Forester, 1993; Hajer, 1995; Fischer and Gottweis, 2012). Only some public concerns will be selected and formally defined as a state problem, for which policies will be proposed as a solution (Jessop, 2016). Further, the way in which state policy constructs environmental problems is an ideological activity, as environmental policies can privilege certain ways of relating to the environment – for example as a hazard, a resource, a commons, or an ancestor (Hajer, 1995; Robbins, 2012; Dryzek, 2013; Yates et al., 2017). To begin my enquiry into the meaning of freshwater policy, then, it is pertinent to ask what public concerns have emerged in relation to freshwater, and how state policies have framed and responded to these problems.

Policies are not enacted upon terra nullius in which all interpretations of policy are possible or equally likely. Rather, the specific language and concepts used in policies have histories and specific meanings attached to them (Bacchi and Goodwin, 2016). Understanding these histories can tell us who has made claims about a policy issue like freshwater, what those claims include, how governments attempt to strategically incorporate, frame, and address those concerns through policy, and what types of interpretations exist around a given policy. Developing a genealogy of the policy problem can allow us to understand what is at stake with how new policy concepts might be interpreted.

This chapter examines how concepts introduced in New Zealand's National Policy Statement for Freshwater Management are pre-figured by historical debates and public concerns. Specifically, the chapter argues that the interpretation of the National Policy Statement is shaped by historical debates about indigenous rights and sovereignty, diagnoses of the causes of environmental degradation, decisions about national identity and economic development, and perceived 'gaps' in New Zealand's environmental regulatory framework. These public concerns have been amalgamated by successive governments into a version of the freshwater 'problem' that the National Policy Statement is intended to address. The National Policy Statement codifies elements of these public concerns into keywords, which act to delimit the problem and frame it in a way that the policy can be said to have succeeded in addressing. In this way, a major aspect of interpretive conflict is about whether the keywords used by the state adequately reflect the deeper public concerns that the policy purports to resolve. To provide some history to the institutional void, it is necessary to interpret these keywords within the wider array of public concerns from which they were drawn.

Tracing the historical roots of contemporary policy concepts serves two functions. First, as a historical foundation for the chapters that follow, this chapter provides an orientation to important social, regulatory, and environmental issues related to freshwater policy in New Zealand. Terms like 'limits', 'collaboration' and 'rights and interests', for example, have specific meanings in New Zealand that need to be understood to grasp what is at stake in recent policy developments. Second, historical analysis reveals how the concepts introduced by a new freshwater policy are likely to be interpreted, and how state and non-state actors have struggled to shape these interpretations. If a public concern is left out of policy or inappropriately codified in a keyword, non-state actors may promote their own keywords or interpretations, which the state may then respond to with a policy revision, and so on. Understanding the historical cycles of incorporation, contestation, and revision of policy concepts is a first step toward understanding how the interpretive politics within an institutional void is structured by a range of actors.

This chapter considers how freshwater policy codifies selected public concerns, why, and with what effects. In New Zealand, claims about freshwater – and state responsibilities for it – are related to issues of colonial history, biophysical understandings of environmental change, economic development, and regulatory arrangements. In the sections that follow I examine each of these issues, tracing the historical antecedents of public concerns that manifest today, and against which current policies derive meaning. I highlight how each aspect of New Zealand’s freshwater problem has been codified in selective ways over time, and which have been further embedded through recent freshwater policy reform. My analysis in this chapter draws on government and policy documents; a review of the academic literature on New Zealand’s environmental governance; semi-structured interviews with veteran intermediaries of New Zealand’s resource management system, three sitting members of parliament, central and local government officials; and notes from two public meetings with the Minister for the Environment in 2016-2017 (see Chapter 1).

Section 2.2 outlines how freshwater is entangled with the problem of ongoing colonialism and indigenous rights. Section 2.3 considers freshwater as a biophysical problem, describing the evolution of scientific knowledge of New Zealand’s freshwater estate, and its associated diagnoses of cause and effect. Section 2.4 shows how freshwater has become a political-economic problem linked with specific industries and urban development, and reviews public perceptions of freshwater over the 2009-2018 period of major national freshwater reform. Section 2.5 describes freshwater as a regulatory problem, caused by the failed implementation of New Zealand’s central piece of environmental legislation, the Resource Management Act 1991. Section 2.6 discusses how successive waves of governmental policy since 1999 have attempted to resolve these freshwater problems through the mechanisms of national policy. These policies do more than simply respond to the freshwater problem; they actively integrate and perform a new concept of the freshwater problem. Finally, in Section 2.7 I summarise the historical context of five keywords that have emerged to centre-stage in discussions of national freshwater policy since 2008. These keywords can be understood as

contemporary ways of codifying and responding to the diverse public concerns in relation to fresh water outlined in Sections 2.2-2.5.

2.2 A problem of colonization: freshwater and indigenous rights

Contemporary freshwater policy needs to be understood in the context of colonialism and the historical and ongoing dispossession of Māori (New Zealand's indigenous people). Ongoing indigenous struggles for recognition, authority, and sovereignty are being pursued against the historical fact that these were promised to Māori by the colonial British Crown. While the Treaty of Waitangi (Te Tiriti o Waitangi) 1840 promised Māori the undisturbed possession of their lands, taonga (treasures), and resources, the Crown failed to fulfil these obligations and instead committed grievous acts of murder, theft, and displacement (see e.g. King 2003). Recognition of the Crown's failures led to the creation of the Waitangi Tribunal and a legal process of settlement between iwi (tribes) and the Crown since 1975. This process of legal settlement is one, partial form of restitution, which has included the creation of specific environmental governance powers along with other forms of redress (Section 2.2.1). The Treaty has also been acknowledged by various environmental and governance laws in New Zealand, notably the Resource Management Act 1991, which has created expectations for regional councils to involve iwi in environmental decision making (Section 2.2.2). A third form of restitution is the quantitative allocation of renewable environmental resources such as fisheries, and perhaps eventually freshwater (Section 2.2.3).

2.2.1 The Treaty of Waitangi 1840 and the settlement of historical grievances

New Zealand is a settler colonial society. After early contact between the indigenous Māori and sailors from Holland and then England, European colonists began to settle in New Zealand from the early 1800s (King 2003). While New Zealand has no written constitution or Bill of Rights that supersedes the laws of parliament, the Treaty of Waitangi signed in 1840 stands as its founding and most significant document, and it is through the Treaty that the

authority to govern New Zealand rests (Mulholland, 2015). The Treaty contains three articles, the meanings of which have been the subject of intense and ongoing debate. Broadly, Article 1 ceded to the British Crown the ability to govern New Zealand, Article 2 guaranteed Māori undisturbed possession over their lands, taonga (treasures), and resources, and Article 3 guaranteed Māori the same rights as Crown subjects (Ministry for Culture and Heritage, 2017). Because the Treaty was written and signed in both Māori and in English, differences of meaning between versions have been hugely consequential. For instance, while Māori ceded an unfamiliar concept of governorship to the Crown, they did not agree to giving up authority to self-govern (see King, 2003). These interpretive differences – as well as blatant disregard by the Crown for its own obligations – have led to continued demands from Māori for their promised rights to land, sovereignty, and equality under the law (see Mulholland, 2015; Sullivan, 2016; Charpleix, 2018).

The actions of the Crown toward Māori after the signing of the Treaty were often violent and reprehensible, involving murder, the confiscation of land, massive displacement, and forced cultural assimilation (King, 2003; Stevens, 2015). In recognition of these injustices, in 1975 the New Zealand government set up the independent Waitangi Tribunal to hear claims of breaches of the Treaty and to make recommendations to government on matters of law and policy. In 1995 the government set up the Office of Treaty Settlements to forge formal legal settlements with ‘large natural groups’ (LNGs) consisting of Māori who share an identity around a common grievance, whether geographical or tribal (New Zealand Government, 2018). These legal settlements can involve land transfers, governance powers, and financial payments, among other things. For iwi (tribes) across New Zealand, the settlement process represents a significant step to reclaiming their authority in a symbolic and material sense. When the settlements are agreed between the government of the day and the LNGs, the settlements are written into law and passed, becoming enshrined in legislation. Settlements include recognitions that designate specific geographical features and an area over which a given iwi (a tribe sharing a common ancestor) has specific legal status, and designated iwi

must be consulted by councils for any activities affecting these designations. Iwi with this status are referred to within the Resource Management Act 1991 as mana whenua (designated authorities).

In the global context of indigenous and environmental law, New Zealand's Waitangi Tribunal and settlement processes grant significant statutory authority and (sometimes considerable) financial recompense to indigenous peoples, especially when contrasted with the settler state governments of Australia, Canada, or the United States. For example, in a world-famous settlement passed into law in 2017, the Whanganui iwi in the North Island have settled with the Crown to grant the Whanganui River the same legal status as a human being (Boyd, 2017; Roy, 2017; Charpleix, 2018). This is being operationalized through a specific co-governance structure, and allows the river's representatives (one Crown appointee and one iwi appointee) to assert the river's rights to dignity and autonomy in court and other planning processes. This settlement included \$80M payment in financial redress, as well as other governance powers. The Whanganui settlement has only been the most recent of high-profile settlements between the Crown and iwi; Waikato-Tainui's 1995 settlement with the Crown included \$170M in land, payments, and financial holdings, and Crown's settlement with Ngāi Tahu (1998) included \$170M in financial redress, among other forms of cultural redress and governance roles. In 2014, the Tuhoe-Crown settlement vested the area of Te Urewera National Park back from the Crown, transforming Te Urewera into 'a legal entity' with 'all the rights, powers, duties, and liabilities of a legal person' (section 11(1)), that would be governed by a Tuhoe-Crown appointed board for the public interest (see Ruru, 2014).

2.2.2 Māori participation in environmental management

While the Tribunal and settlement processes address past grievances relating to the Treaty of Waitangi, there is also an expectation that any new laws and policies should give effect to the Treaty, or else risk further claims for redress through the Tribunal. As Māori have unique relationships to New Zealand's environment that are guaranteed protection under Article 2 of

the Treaty, government policies relating to the environment must explicitly address Treaty principles (Robb et al., 2015). If Māori consider that new policy or legislation contravenes the Treaty, they can file a claim in the Waitangi Tribunal to seek redress.

Over the years, many laws and policies enacted by local and national governments have attempted to give effect to Treaty obligations. Although a rigorous evaluation of the authenticity and effectiveness of such attempts is beyond the scope of this chapter, it is worth noting that provisions for Māori participation in decision making within major pieces of legislation such as the Resource Management Act 1991 (RMA) and Local Government Act 2002 were generally vague and minimal. Section 8 of the RMA, for example, instructs all persons exercising powers within the RMA to ‘take into account the principles of the Treaty of Waitangi’. Although Section 35A of the RMA instructs councils to keep records of iwi and hapū (subtribes) within their regions, expectations for Māori involvement in planning beyond this were underspecified, and as such progress toward shared decision making has been limited (Williams, 2007; Robb et al., 2015).

While the RMA and other laws have highlighted the significance of the relationships between Māori and the natural environment (e.g. identifying culturally meaningful sites and ecosystems), in practice the involvement of Māori in freshwater planning has been heterogeneous and generally lacking, although some regional councils have made considerably more effort than others (Harmsworth et al., 2016). Increasingly, for example, regional councils are creating co-governance boards to oversee environmental planning and decision making; these can range from purely advisory (e.g. Northland) to having voting and veto rights (e.g. Greater Wellington, see Chapter 4). While such co-governance boards are applauded by some Māori researchers (e.g. Harmsworth et al., 2016), in practice the composition of these boards can involve intense political struggle and their legitimacy can be contested by Māori. Some iwi have had their genealogy and grievances formally acknowledged by the Crown through the settlement process and thus have acquired mana

whenua status, whereas other iwi have not. This adds complexity and conflict when seeking formal representation in the planning process (e.g. see Sinner and Harmsworth, 2015).

Judge Joe Williams (2007) observes that it has been Treaty settlement processes – rather than vague RMA provisions – that have materially enabled Māori to engage meaningfully with resource management processes. Crawford (2007), Robb et al. (2015), and Ruru (2018) also contend that regional councils’ engagement with iwi through the RMA has been variable and unsatisfactory. They cite a need to train council staff in the role of the Treaty as well a need to compel councils explicitly to engage with iwi through defined parameters. As we will see in Section 2.6 (national policy developments), the National Policy Statement on Freshwater Management has included additional provisions to specify expectations for the involvement of iwi in freshwater management.

2.2.3 Māori ownership of water

While Article 2 of the Treaty guaranteed Māori the ‘undisturbed possession’ of their land, taonga, and resources, the issue of ownership of water was not directly addressed. In the context of increasing resource scarcity and commercial use of water, the issue of ownership has risen to become a major political topic. Stated first in the 1960s and again more forcefully in the late 2000s, the Crown has asserted the common law position that ‘no one owns water,’ reserving the sole right to manage water for the public interest (Strang, 2014; Salmond, 2017). Crown law – such as the RMA – created a framework to allow private interests to extract water, which could then be sold for a profit, but this was not the same as allocating ownership (according to the argument). This legal doctrine was thrown up for contest in 2011 when the fifth National government proposed to sell off major public assets including 49% of the state-owned enterprise Mighty River Power, a hydropower company. The Māori Council, a statutory body representing all Māori, argued to the Waitangi Tribunal that by effectively selling the rights to manage water, the Crown is asserting ownership, and if ownership exists then Māori must have prior right to the resource. The Tribunal agreed that Māori ownership

of water was indeed equivalent to the Crown's, and it recommended delaying the sale of the assets until such a time as Māori rights and interests in water could be worked out (see Strang, 2014; Salmond, 2017). Despite this recommendation, and despite a public-initiated referendum overwhelmingly against the asset sales (67%), in 2013 John Key's National government sold off 49% of Mighty River Power, Meridian Energy, Genesis Power, Solid Energy, and Air New Zealand.

Since then the issue of Māori 'rights and interests' in water have become a prominent issue that continues to complicate questions of how freshwater might be allocated in a quantitative sense. This stands in stark contrast to the example of fisheries. In the mid-1990s when New Zealand developed its then-revolutionary quota management system to ensure fishing yields were sustainable, the Crown settled with Māori at the national level to allocate 20% of the catch quota to Māori through a new national fisheries organization. With fisheries, Māori were given a quantitative percentage of the commercially harvestable yield. With freshwater, however, Ruru observes that successive governments have continued to deny Māori their economic recompense in relation to freshwater. She argues that 'real reconciliation in a decolonized context will remain elusive until fair, complete, and holistic restitution for water grievances is offered across all redress spectrums, including cultural, commercial, and proprietary' (Ruru, 2013: 311).

2.3 Changing freshwater environments: knowing the national freshwater 'problem'

Deteriorating freshwater ecosystems across New Zealand provide the biophysical basis for claims of freshwater 'crisis' and demands for strong state regulation of human activities (Knight, 2016). But changing material conditions are not enough to generate this diagnosis; scientific knowledge of ecological change had to be constructed, scaled, and made authoritative. Moreover, explanations for changing ecosystems had to be developed to identify which human activities ought to be regulated, and how, to protect freshwater ecosystems. It has taken several decades to build a firm scientific foundation for the

identification and attribution of the ecological ‘problem’ posed by ongoing forms of water extraction and land use. While New Zealand has relatively abundant freshwater in volumetric terms, its distribution across the environment, coupled with pollution from land use patterns, mean that water quantity and quality require careful management (OECD, 2017b).

In the early 1990s there were indications that New Zealand’s freshwater estate was already under strain from agricultural development (Sinner, 1992; Smith et al., 1993). However, since water extraction and pollution were not yet pushing ecosystems past visible tipping points, and since pollution from large sources (such as industrial or wastewater plants) was being reduced under the Resource Management Act (see Section 2.5), there was little political appetite to further examine these environmental effects or consider regulatory options (Consultant 2a, 2016). The OECD’s 1996 environmental performance review of New Zealand concluded that ‘Thanks to a very low intensity of water use and low overall levels of pollutant discharges from point sources, New Zealand’s rivers, lakes and groundwater generally present very high water quality’ (OECD, 1996: n.p.).

2.3.1 Characterising ecological decline: State of Environment reporting

New Zealand’s freshwater ‘problem’ has been made visible in significant part through legally-mandated State of the Environment (SoE) reporting conducted by the Ministry for the Environment, drawing on regional council data. While the first SoE report published in 1997 noted a high overall level of environmental quality, it recognized significant urban and agricultural pressures on aquatic ecosystems, as well as the impacts of invasive species and habitat transformation. In urban environments, sewerage overflows (and bacteria such as *E. coli*), heavy metals, hydrocarbons (from cars), and sediment were key freshwater contaminants (MfE, 1997). In rural areas (i.e. most of the country), water quality was generally high in mountain tributaries and decreased in lowland streams and pasture-dominated landscapes, with some rivers unsuitable for swimming due to high levels of fecal contamination (ibid). Within some areas of intensive dairy farming, water quality was even

too toxic for livestock to drink (MfE, 1997: 7-7). In 2007, the second SoE report concluded that while New Zealand's water was 'still generally good by international standards' (MfE, 2007: 304), demand for freshwater had increased more than 50% since 1997 and 'some aspects of water quality are getting worse' (MfE, 2007: 261). In particular, 'increasing pollution from non-point sources, such as diffuse run-off from pasture and from paved surfaces in urban areas, poses the greatest challenge for water management in New Zealand' (MfE, 2007: 304). Increased stocking rates and use of nitrogen-based fertilizers were identified as key contributors of nutrients (nitrogen and phosphorous), sediments, and animal effluent (including bacteria such as *E. coli*) into waterways (ibid: 266).

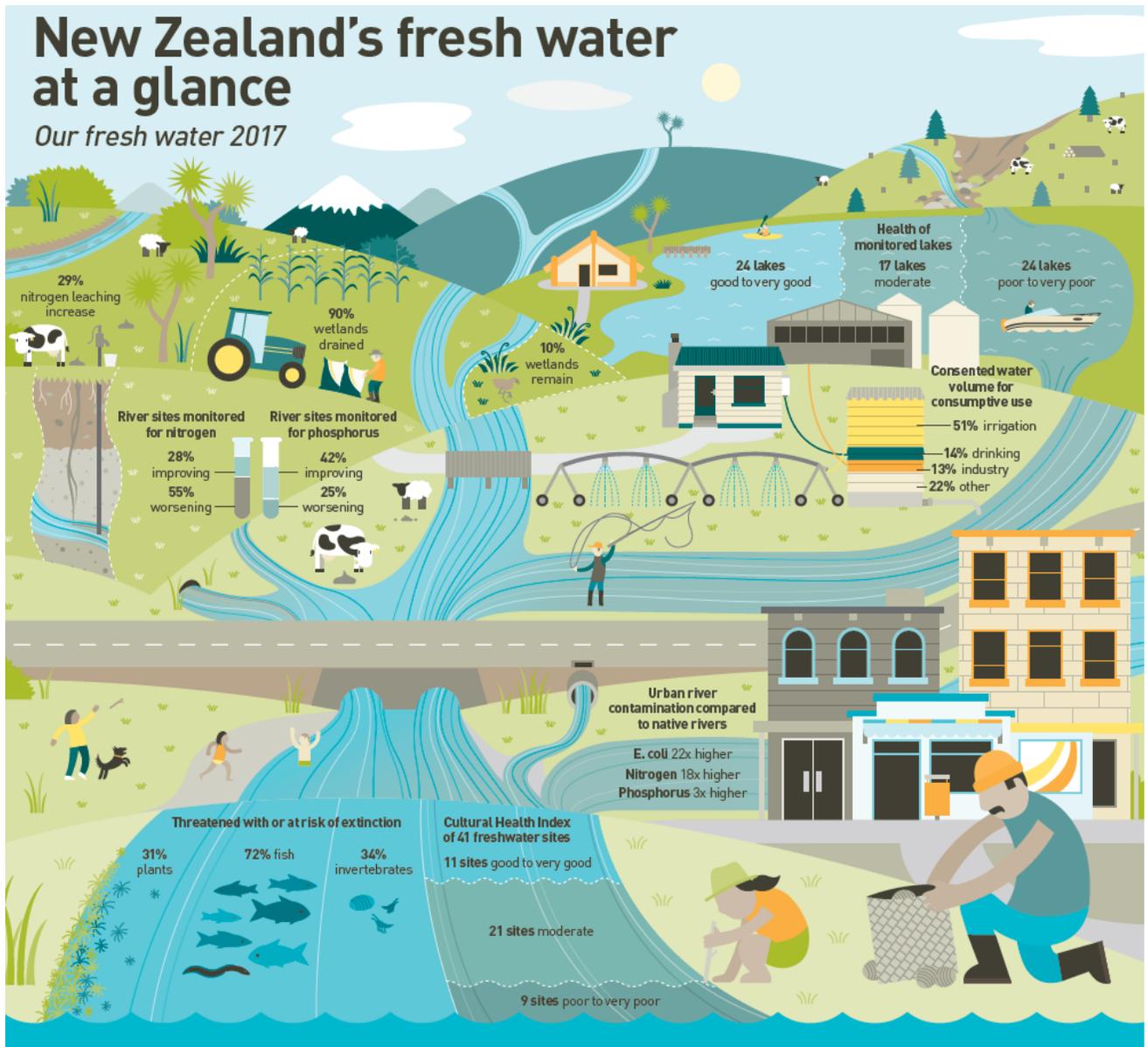
By the 2015 SoE report, multi-decadal analyses of river water quality were now possible. Over 1989-2013, 60% of river monitoring sites showed a significant increase in total nitrogen concentrations, while only 9% showed a decrease, and the rest were indeterminate (see Table 1). During this period, total nitrogen increased 12% on average across all sites (MfE and Stats NZ, 2015: 10). The 2015 and 2017 SoE reports conclude that nitrogen (mainly from fertilizer and cow urine) and *E. coli* (from human and animal feces) are higher in urban and agricultural land use areas, and ecological health (as indicated by the macroinvertebrate index) is lowest by far in urban sites. In 2017, the freshwater-specific SoE report found that 72% of reported native freshwater fish species were threatened or at risk of extinction in 2013, along with 34% of freshwater invertebrates and 31% of reported plant types (MfE and Stats NZ, 2017: 14-15). A summary of information on the state of New Zealand's freshwater ecosystems from 2017 is shown in Figure 1.

Table 1. Trends for water quality variables in NIWA’s National River Water Quality Network 1989-2013 (77 sites). Source: MfE and Stats NZ (2015).

Variable	Trend	Sites showing a statistically significant increase (%)	Sites showing a statistically significant decrease (%)	Sites showing an indeterminate trend (%)
Clarity	↗	64	9	27
Total nitrogen	↗	60	14	26
Nitrate-nitrogen	~	52	27	21
Ammonia-nitrogen	↘	4	78	18
Total phosphorous	~	38	30	32
Dissolved phosphorous	↗	51	14	35
Macroinvertebrate community index (MCI)	~	5	13	83

Figure 1. Infographic of statistics from Our Fresh Water 2017. Reproduced with permission.

Source: MfE (2017j).



2.3.2 Explaining ecological decline: pastoral intensification and urban development in the spotlight

The picture emerging from successive SoE reports is one of widespread (albeit uneven) degradation of freshwater ecosystems, driven by the physical transformation and biochemical contamination of rivers and other waterbodies. Physical transformation of rivers has been driven by processes of urbanisation, infrastructure (e.g. roads, dams), and wider land use changes in the catchment (e.g. water use and sediment production). The chief chemical contaminants causing ecological decline – nitrogen and phosphorous – have been clearly linked to the use of industrial fertilizers and increasing stock numbers. For example, Julian et al. (2017) found that nitrogen and phosphorous levels across space and time could be best predicted by cattle density, followed by the level of plantation forest coverage. Excess nitrogen and phosphorous poisons aquatic animals and feeds algae blooms, which in turn choke the water of oxygen and smother existing habitat. In addition to nitrogen and phosphorous contamination, bacteria such as *E. coli* pose a direct health concern for humans and animals. *E. coli* and other bacteria from human wastewater and animal effluent in waterways can make animals sick, as occurred when 5,500 human residents of Havelock North became sick in 2016 from drinking water contaminated with *Campylobacter* species of bacteria sourced from sheep feces (Government Inquiry into Havelock North Drinking Water, 2017). Previous studies have shown that urban and intensive pastoral land uses are associated with higher *E. coli* and nitrogen levels in waterways (Larned et al., 2016). Pastoral land use is also associated with higher water temperatures due to the removal of shading trees, which inhibits fish growth and promotes algae blooms (Ballantine and Davies-Colley, 2014).

The scientific basis of freshwater degradation has its foundations from state and non-state scientific analyses, and has converged around a small number of variables. While SoE reports can present positive and negative spins on data, they are at least partially constrained by mainstream scientific findings. While the SoE reports may place more emphasis on

characterising ecological decline rather than identifying or quantifying its causes, ample scientific research and policy analysis underpins some general claims about water quality (see PCE, 2013, 2015). This resulting scientific consensus has emphasised a set of common pressures:

- Nitrogen, sourced from fertilizer (via animal effluent)
- Phosphorous, sourced from fertilizer
- *E. coli* and other bacteria, sourced from animal and human feces
- Sediment, sourced from erosion-prone land uses

2.4 Freshwater as a public problem: economic discourses and political demands

Public meanings of freshwater have changed over time, and have been shaped by media representations, economic changes, and changes in how people interact with the environment. Here I briefly survey how freshwater has been framed in the public sphere as an economic resource vs a public commons, as this affects how political demands regarding freshwater have been made upon governments.

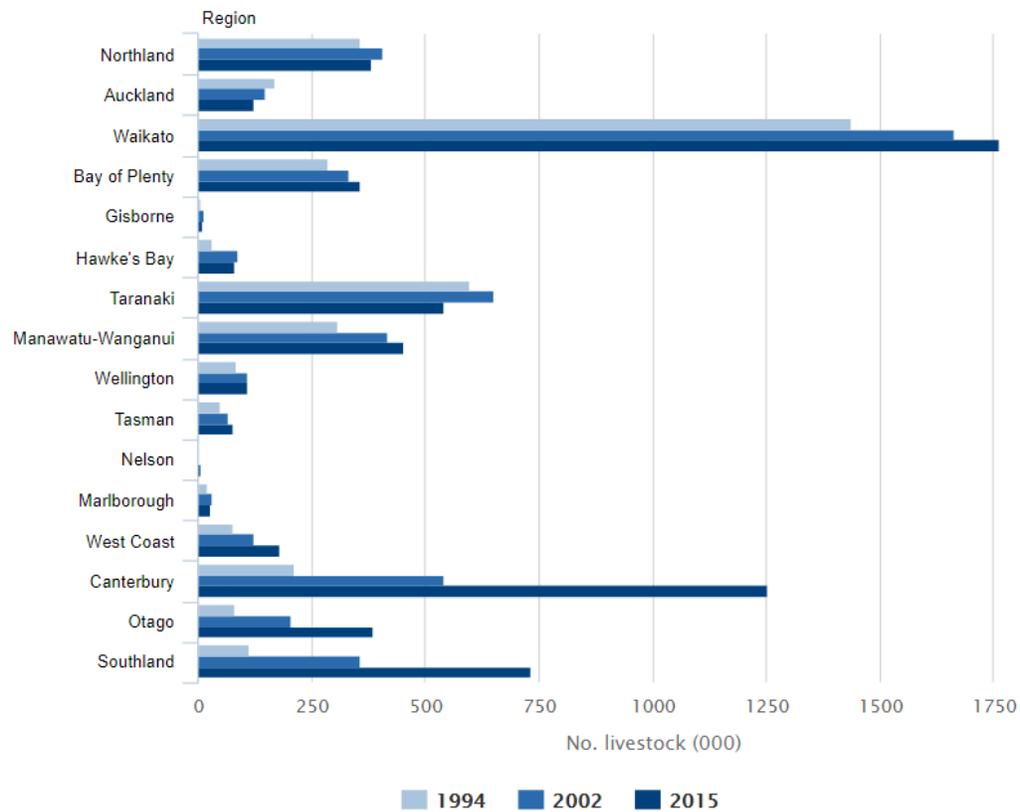
Māori have had deep spiritual and ancestral relationships with the land and water long before European colonization (see Robb et al. 2015, Knight 2016, Salmond 2017). Since colonization, farming for sustenance and then the market has become a significant and enduring part of cultural identity for many pākehā (European) New Zealanders, as well as Māori (King, 2003). Early frontier narratives described settlers inhabiting dangerous new territories in need of taming and cultivation, who saw rivers as transportation routes, hazards, picturesque settings, and drains for industrial and residential production (Knight 2016). Acclimatisation societies planted willows on riverbanks, introduced mammalian predators (to ecosystems where mammalian predators had not existed), and introduced trout to waterways, all to make New Zealand feel more like England (ibid). In more recent times, recreational pastimes have developed, such as angling, kayaking and hiking, and dams were built for both water

supply and, later, hydropower. Flood control and engineering structures radically transformed many rivers in urban and rural settings. These settler colonial narratives of freshwater landscapes continue to influence New Zealand's freshwater politics. For example, contemporary aspirations for 'swimmability' in New Zealand are anchored in personal memories of a more idyllic and rural New Zealand, where families took kids to swim in rivers over summer or picnicked down at the lake (interview, C. Delahunty 2016; public meeting notes, N. Smith 2017).

Compared to other developed nations, New Zealand has a relatively high standard of living, wellbeing and environmental quality, albeit with lower than average income, wealth, and productivity (OECD, 2017a). Agriculture continues to play a major part in the otherwise service-focussed New Zealand economy, with dairy accounting for 23% of exports, the largest share from a single industry (Statistics New Zealand, 2015). From 1991 to 2018, the New Zealand population grew from 3.5M to 4.9M (Statistics New Zealand, 2018), with 14.9% of residents registering as Māori in the 2013 census (Statistics New Zealand, 2013).

After major neoliberal reforms to the public sector of the 1980s, the fourth National government (1990-1999) sought to open the New Zealand economy through free trade agreements in 1990s. The Uruguay round of the General Agreement on Tariffs and Trade resulted in lower barriers for NZ exports, creating a windfall gain in market share for low-cost agricultural producers from New Zealand (PCE, 2004). This led to a 'dairy boom' that transformed land use across New Zealand in the 1990s (Consultant 2a 2016, interview, D. Parker 2016). Massive land use conversion from sheep and beef farming to dairy commenced, particularly in Canterbury, Southland, and Manawatū-Wanganui (also known as Horizons) regions, coupled with an intensification of existing dairy operations (see Figure 2). The scale and pace of environmental change was highlighted by environmental groups in the late 1990s and early 2000s, through both formal and informal strategies.

Figure 2. Dairy cattle by region 1994, 2002, 2015. Reproduced under a Creative Commons Attribution 4.0 International Licence. Source: Statistics New Zealand (2017a).



In the early 2000s, the New Zealand Fish and Game Council (henceforth Fish and Game) ran a major public campaign drawing attention to the environmental impacts of ‘dirty dairying’ (Holland, 2014). This coincided with the influential 2004 *Growing For Good* report published by the independent Parliamentary Commissioner for the Environment. That 236-page study of nitrogen and water in farming systems identified concerning trends toward pastoral intensification (especially around dairy farming) and projected how these trends would likely impact water quality (PCE, 2004). The ‘dirty dairying’ campaign and *Growing For Good* report fuelled much public debate and a challenge to the fifth Labour government’s (1999-2008) attempt to brand New Zealand as ‘clean and green’ to its trading partners. A key outcome of the ‘dirty dairying’ campaign was the creation of an industry-driven voluntary

agreement called the Clean Streams Accord, which promised to fence stock out of waterways. While some observers are critical of the Accord and other voluntary measures to improve environmental performance (see Holland, 2014), Kevin Hackwell from the environmental organization Forest and Bird emphasises that the Clean Streams Accord led to industry and environmental groups working together in a positive way outside of the courts (interview, K. Hackwell, 2017).

The year 2009 marked the beginning of the contemporary phase of intense public interest in freshwater issues. In that year, the trialling of a novel ecological assessment method on a large North Island river produced headlines such as *Manawatū River ‘among the worst in the West’* (Morgan and Burns, 2009), which led to intensifying national debate about farming and water quality. In the Manawatū region, this resulted in the creation of the Manawatū River Leaders Forum, a stakeholder collective promising a range of actions to clean up the river (e.g. see Naovalat, 2015). In early 2011, centre-right Prime Minister John Key – who was also Minister for Tourism – appeared on the BBC’s interview show *Hard Talk* and was challenged about New Zealand’s marketing claim to be ‘100% Pure’. When the interviewer cited ecologist Mike Joy’s research and claims of widespread ecological degradation, Key dismissed Joy’s diagnosis as the views of ‘one academic.’ This sparked much commentary in New Zealand about the objectivity of science, the state of freshwater, and the relationship between the environment and the national economy (e.g., Manhire, 2011). By this time, freshwater was firmly on the political agenda and a matter of public discourse. In the 2011 general election the Green Party campaigned on ‘Rivers, jobs, and kids’, and their representation rose from 9 to 14 seats in a 120-seat parliament, a level which it then held in the 2014 election, in part by campaigning for environmental care (Levine and Roberts, 2015). As will be discussed in Section 2.6.2, the term of the fifth National government (2008-2017) involved the creation of the Land and Water Forum as a civil society group to guide major reform to national freshwater policy; the creation of a National Policy Statement on Freshwater Management in 2011, with revisions in 2014 and 2017; and in 2012 the

reassertion that ‘no one owns water’, as the government sold off 49% of major public assets (see Section 2.2.3).

Since 2014, much news and commentary has been produced about freshwater management, driven in part by the significance and pace of national level freshwater policy developments. Table 2 presents an indicative sample of in-depth news articles, commentaries, and investigative studies (including documentaries) from 2016-2018 alone. Over the last two years, at least five types of societal concern about freshwater can be distinguished; illustrative headlines are summarised in Table 3. One is the increasing visibility of ecological degradation and collapse of freshwater ecosystems due to pollution and over-extraction. The drying up of the large Selwyn River in Canterbury, and the ecological crises of the Waituna Lagoon, Te Waihora/Lake Ellesmere, and Lake Horowhenua, are major examples (see Table 3). Second, direct concerns for human and animal health have been brought into focus through recent events in the Hawkes Bay and Auckland regions, among others. In Hawkes Bay, there have been reports of pet animals dying from drinking environmental water and playing in shallow lakes, and an outbreak of human bacterial infection in Havelock North caused national headlines when fecal bacteria from farm animals leaked into the town’s water supply in 2016. In Auckland, several popular beaches have had to close due to bacterial contamination. Third, outcry has arisen regarding the regulatory status of bottled water. News coverage of water bottling plants in Canterbury and Hawkes Bay has highlighted how these firms extract water free of charge and export it to foreign markets. This has roiled environmental groups and political parties on the left; the Green Party for example, campaigned in 2017 on placing a charge on the use of water for bottling and sale. Fourth, the aspiration for ‘swimmable’ rivers and lakes has emerged as a political demand due in significant part to the public and political backlash to the fifth National government’s freshwater policy in 2014 (discussed below in Section 2.6.2). This aspiration intensified significantly in 2017 when the government proposed ‘90% of rivers and lakes swimmable by 2040’ (MfE, 2017a), and public discourse became filled with scientific critiques of the government’s definition of ‘swimmability’ and

cries of statistical chicanery (see Table 3). Finally, there has been a new interest in freshwater policy, agricultural industry, and the roles of regional and national government in securing the environmental public good. This takes the form of coverage and commentary about the roles of regional councils as environmental regulators.

Table 2. A sample of commentaries, documentaries, and in-depth investigative articles on New Zealand's freshwater crisis (from 2016-2018).

EDITORIALS

100 percent pure or 60 percent polluted? (2016) Radio NZ

Can you believe we're fighting for clean water in New Zealand? (2016) Manawatū Standard

Water shaping up to be hot topic at next election (2016) TVNZ

Jack Tame: Talking 100% Pure and water till the cows come home (2017) NZ Herald

'Unprecedented' freshwater rescue plan unveiled by advocacy groups (2017) Stuff.co.nz

Economist blames cows for state of NZ's rivers and lakes (2017) Radio NZ

Farm impact on water quality blown out of proportion - Federated Farmers (2017) Newshub

NZ's economic growth model pushing environmental limits – report (2017) Radio NZ

Sustainability of New Zealand's dairy industry under question (2018) Newshub

INVESTIGATIVE ARTICLES

Take me to the river (2014) The Listener

River stance: Mike Joy's controversial crusade to save New Zealand's waterways (2015) The Listener

Water fools? (2017) Special report series by Radio New Zealand, includes:

Worry in Waihora

Pumped dry – central Otago farmers' fight for water

'Recharging' Canterbury's aquifers

Southern lakes: a changing landscape

Pollution in a Piha paradise

The river is me

River damage from forestry in Northland

Sacred pipi beds polluted

Insight: A line in the sand for freshwater quality? (2017) Radio New Zealand

Brighter Future? Murky prognosis for freshwater health (2017) Radio New Zealand

Troubled waters (2017) New Zealand Geographic

Special report: how polluted are New Zealand's rivers? (2017) Newshub

Insight: Fighting for NZ's Rivers and Lakes (2017) Radio NZ

Farming for our future (2018) New Zealand Geographic

DOCUMENTARIES

Saving the Selwyn (2017) Television documentary, TVNZ (16m)

New Zealand: Polluted Paradise (2017) Two-part television documentary, Aljazeera. Part 1 (25m), Part 2 (25m), dir. N Zalk

Seven rivers walking (2017) Documentary film, 82m, dir. K Gallagher, G Barnes

By 2018, freshwater issues have become a prominent feature the national public discourse and politics, with a recent poll showing that over 75% of New Zealanders (n=1000) indicate that they are 'very' or 'extremely' concerned about the pollution of waterways (Radio New Zealand, 2018b). A longitudinal study of New Zealander's attitudes towards freshwater recorded a recent and sharp uptick in the number of people who consider the quality of rivers and lakes as 'bad' or 'very bad' since 2010 (see Hughey et al., 2016). In the arena of international reputation, the OECD (2017b) report that the production and maintenance of New Zealand's '100% Pure' brand has become a major matter of concern for many industry and trade sector organizations.

Table 3. A sample of media articles about freshwater (2016-2018), organized into five themes.

Theme	Title	(Year) and source
Freshwater ecosystems in crisis	Fresh water results worst ecology professor has seen	(2016) Radio NZ
	Lake Ellesmere algal bloom warning lifted after three years	(2017) The Press
	Selwyn's water woes becoming 'worse and worse'	(2017) The Press
	Shocking sight of Waikato stream running green with effluent from 'deliberate' dairy farm discharge	(2017) TVNZ
	Public warned to stay out of Waituna Lagoon	(2017) Stuff.co.nz
	Deformed snails found in toxic runoff-plagued Wellington stream	(2017) Stuff.co.nz
	Dramatic maps released showing state of crisis in nation's wetlands	(2018) Stuff.co.nz
	Lake Horowhenua 'stuffed' Forest and Bird say	(2018) The Manawatū Standard
	Cow pee: 200 tonnes of nitrogen leaching a day	(2018) The Country
Human and animal health	Lake Ōmāpere turns green and smelly with algae bloom	(2018) Newshub
	Hundreds of eels found dead in Christchurch stream	(2018) Stuff.co.nz
	Gastro bug hit 5000 in Havelock North	(2016) Radio NZ
	Canterbury's poisonous Lake Forsyth kills sheep, full of green slime	(2016) Stuff.co.nz
	Toxic algae warnings in Hawke's Bay after dog's death in Tukituki River	(2016) The Dominion Post
Water bottling	Christchurch's pure drinking water could be contaminated due to farming	(2017) Stuff.co.nz
	Swimming off limits at 50 Auckland beaches	(2018) Newshub
	ECan accused of 'bending the law' over consents for water bottling plants	(2018) Stuff.co.nz
	Hawke's Bay water bottling plant lies dormant for four months	(2017) Stuff.co.nz
	Ashburton residents demand council ditch water bottling plan	(2016) TVNZ
Swimmability	Elation as Ashburton council backs out of controversial water bottling deal	(2016) Stuff.co.nz
	Call for halt on water bottling consents	(2017) Radio NZ
	New Government target to see 90 per cent of rivers and lakes 'swimmable' by 2040	(2017) Stuff.co.nz

	<p>New swimmable standard 'less stringent' – NIWA</p> <p>Changes to clean-water standards a 'shambles', say conservationists</p> <p>Swimmable waterways standard 'confusing' – scientist</p> <p>Labour wants waterways 'genuinely swimmable' in five years</p> <p>Councils are already struggling with swimmability targets. Here's why that's a problem</p> <p>The cost of making our rivers swimmable</p>	<p>(2017) Radio NZ</p> <p>(2017) NZ Herald</p> <p>(2017) Radio NZ</p> <p>(2017) New Zealand Geographic</p> <p>(2018) Stuff.co.nz</p> <p>(2018) NZ Herald</p>
<p>Regional councils, central govt, and industry</p>	<p>By the numbers: ECan's 'relaxed' monitoring regime leaves thousands unchecked</p> <p>Federated Farmers boss admits spilling effluent into stream</p> <p>Illegal water-take data a 'wake-up call' for all water users</p> <p>Irrigators are Canterbury's biggest rule-breakers</p> <p>No plans to clean up Auckland aquifer</p> <p>RMA failed to protect New Zealand - new report</p>	<p>(2016) The Press</p> <p>(2016) Radio NZ</p> <p>(2016) Timaru Herald</p> <p>(2016) Stuff.co.nz</p> <p>(2016) Radio NZ</p> <p>(2016) NZ Herald</p>

2.5 Freshwater as a problem of environmental planning: the Resource Management Act 1991

The human activities affecting freshwater and its ecosystems are subject to regulation by many New Zealand laws, foremost of which is the Resource Management Act 1991. The Resource Management Act 1991 (henceforth RMA) is the primary organizing environmental law in the New Zealand, and was intended to provide a framework to ensure the sustainable use of environmental resources. Considering the contemporary crisis of deteriorating freshwater ecosystems, many policy actors have diagnosed the RMA and its planning system as having failed. These diagnoses have heavily influenced current understandings of freshwater as a regulatory ‘problem’, and it is important to contextualise these diagnoses as well as consider which other readings of the problem have not gained traction in the present. This section describes the origin and philosophy of the RMA (Section 2.5.1), how it works in practice (Section 2.5.2), and explores arguments for how the RMA ‘failed’ to prevent the contemporary freshwater crisis.

2.5.1 Context and philosophy of the RMA

The RMA was initially developed toward the end of New Zealand’s fourth Labour government (1984-1990), which was responsible for undertaking some of the deepest neoliberal reforms to the public sector across the industrialized West (Kelsey, 1995). Inspired by the 1987 Brundtland Commission’s report advocating for nations to pursue sustainable development as a normative goal, deputy Prime Minister Geoffrey Palmer advocated for a major restructuring of environmental management law around these principles (Randerson, 2007; Palmer, 2013; Knight, 2018). Although Palmer’s legislation could not get passed in parliament within Labour’s term, the incoming environment minister of the fourth National government (1990-1999) asked Tony Randerson, Guy Salmon, and other environmental experts to lead a review of Palmer’s proposal and develop what became the Resource Management Act 1991 (Randerson, 2007).

The RMA was recognized internationally as the first piece of legislation to enshrine the concept of sustainable development into law (Consultant 2a; Peart, 2007a; EDS, 2016). Philosophically the RMA is built around three main pillars (Randerson, 2007). The first is ‘to promote the sustainable management of natural and physical resources’ (See Table 4). In principle, all planning decisions and regulations made within the powers granted by the RMA must fulfil the sustainable management criterion. The second pillar is effects-based management. The RMA, in contrast to the Town and Country Planning Act 1977 that preceded it, does not and cannot direct land use based on societal or economic benefits; it enables only the acceptance or rejection of development applications based on environmental effects. The intent was to allow land users to improvise to reduce environmental effects, instead of prescribing activities (see Memon and Gleeson, 1995; Palmer, 2013). Third, the RMA embraced the principle of subsidiarity by delegating responsibility for implementing the Act at a regional scale to 16 elected regional councils (see Figure 3)³. As Palmer (2013) himself describes it, ‘the central philosophy behind the Act [was] to move away from a system of centralised activity-based planning to one driven by the effects of activities, with the assessment of those effects to be made at the local level’ (p22). The RMA was thus intended to provide strong measures to ensure environmental protection, without reaching too far into decision making about the nature of development (see Memon and Gleeson, 1995; Randerson, 2007; Salmon, 2007b).

³ At first 17 areas were designated, but within a few years the Act was revised to the 16 regional boundaries that have endured to the present.

Table 4. Part II, Section 5 of the Resource Management Act 1991, as of 18 October 2017.

Available at <http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM231905.html>

Purpose

- (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
- (2) In this Act, *sustainable management* means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—
 - (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
 - (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
 - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment

Figure 3. Map of New Zealand's 16 regional council boundaries. Reproduced with permission.
Source: <https://teara.govt.nz/en/map/2740/regional-council-boundaries>



2.5.2 How the RMA works

The RMA prescribes a nested hierarchy of decision making layers (OECD, 2017b). At the top of this hierarchy lies the Purpose and Principles (i.e. RMA Section 5) of the RMA itself, to which Regional Policy Statements and plans (and logically, resource consents or permits) are accountable. To implement the Act, regional councils are tasked with producing Regional Policy Statements, which may be supported with regional plans. Regional Policy Statements (RPSs) are high-level visions which contain i) objectives for achieving the principles of the Act within a region, and ii) policies which describe how they will realize those objectives. Table 5 compares examples of objectives and policies within an RPS with the rules and other methods found in a plan. In contrast to the high-level policies of RPSs, regional plans (henceforth plans) are detailed documents containing specific methods for achieving the objectives of an RPS (Consultant 2a, 2016).

Table 5. Comparing the high-level objectives of a Regional Policy Statement with the detailed rules of a regional plan. Source: Environment Canterbury (2017, 2018).

Regional Policy Statement	Regional Plan
<p>Canterbury Regional Policy Statement, operative 2013</p> <p>OBJECTIVE</p> <p><i>7.2.1 Sustainable management of fresh water.</i></p> <p>The region’s fresh water resources are sustainably managed to enable people and communities to provide for their economic and social well-being through abstracting and/or using water for irrigation, hydro-electricity generation and other economic activities, and for recreational and amenity values, and any economic and social activities associated with those values, providing:</p> <ol style="list-style-type: none"> 1. the life-supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded; 2. the natural character values of wetlands, lakes and rivers and their margins are 	<p>Change 1 (Selwyn/Waihora), operative February 2016, Canterbury Land and Water Plan</p> <p>RULES</p> <p>11.5.8 From 1 January 2017, the use of land for a farming activity in the Selwyn Te Waihora subregion is a permitted activity, provided the following conditions are met:</p> <ol style="list-style-type: none"> 1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum; and 2. No part of the property is located within the Phosphorus Sediment Risk Area as shown on the Planning Maps; and 3. No part of the property is located within the Lake Area in the Cultural Landscape/Values Management Area; and

<p>preserved and these areas are protected from inappropriate subdivision, use and development and where appropriate restored or enhanced; and</p> <p>3. any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for.</p> <p>POLICY</p> <p><i>7.3.1 Adverse effects of activities on the natural character of fresh water</i></p> <p>To identify the natural character values of fresh water bodies and their margins in the region and to:</p> <ol style="list-style-type: none"> 1. preserve natural character values where there is a high state of natural character; 2. maintain natural character values where they are modified but highly valued; and 3. improve natural character values where they have been degraded to unacceptable levels... 	<p>4. The practices in Schedule 24 are being implemented and the information required is recorded in accordance with Schedule 24, and supplied to Canterbury Regional Council on request.</p>
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The primary mechanism for regulating environmental effects in New Zealand lies in the issuance of resource consents (OECD, 2017b). Within a plan, councils can classify named activities as permitted, controlled, discretionary, restricted, or non-complying. If an activity is permitted, then no resource consent is required. If an activity requires a consent, then applicants must follow the designated procedures to acquire a consent. When applying for a consent, applicants must provide an assessment of environmental effects stating what efforts will be taken to avoid, mitigate or remedy adverse environmental impacts (Palmer, 2013). Councils can place conditions upon resource consents or even upon permitted activities, directing applicants to undertake specific practices in relation to reducing effects on the resource. For freshwater, resource users must consult plans and potentially acquire consents if their activities involve i) the extraction of water (RMA Section 14), ii) any activities on the beds of rivers or lakes (RMA Section 12), or iii) discharge pollutants into water or soil (RMA Section 15).

In addition to praise for its focus on environmental effects, the RMA has been positively evaluated internationally for creating multiple avenues for public participation in the planning process (Peart 2007). Councils are required to publicly notify all RPSs, plans, and RPS/plan changes, as well as some types of resource consents. When these are notified, any person may submit feedback on the proposal (RMA Section 96). Further, any decision made by councils about an RPS, plan, RPS/plan change, or resource consent can be appealed to the Environment Court, where greater scrutiny is placed on the evidence base for environmental effects, and more financial resources are needed (Palmer, 2013). In Environment Court, submitters and/or resource consent applicants can challenge the chain of logic spanning from the RMA principles through to an RPS, plan, rule, or consent: ‘So with the RPS you can say “this policy won’t achieve the objective”, “this policy is inconsistent with the objective”, “this policy is inconsistent with Section 5 of the RMA”, “this policy doesn’t get the balance right”, “this policy doesn’t give effect to the principles in sections 6, 7 and 8 [of the Act]”’ (Consultant 2a, 2016).

Finally, and most important for this study, from its inception the RMA has assigned power to the Minister for the Environment to produce National Policy Statements (NPSs) and National Environmental Standards (NESs). These national regulations would sit above RPSs and plans, where RPSs must be amended to ‘give effect to’ any NPS or NES (RMA section 55(2)(b)). The Minister can notify an NPS or NES as a national regulation without having to pass a law through parliament. For the first two decades of the RMA (prior to May 2011), only a single NPS was notified – the Coastal Policy Statement 1994 (updated 2010), and three NESs (air quality 2004, drinking water 2008, electricity transmission 2010).

2.5.3 Explaining degradation of freshwater ecosystems under the RMA: toward a sociology of environmental planning

How is it that New Zealand’s freshwater ecosystems have been able to degrade, given the strong principles of sustainable management embedded in the RMA 1991? Has the RMA

failed, and if so, how? There has been no shortage of observations of and explanations for the ‘failure’ of the RMA to protect the environment, and freshwater deterioration has often figured as a prominent example of such failure (see e.g., EDS, 2007; Turnbull Group, 2009; Office of the Auditor-General, 2011; Palmer, 2013; MartinJenkins, 2015; EDS, 2016). A 2007 survey of experienced resource management practitioners (n=70) by the non-partisan Environmental Defence Society reported that 40% of respondents felt that the RMA was not performing satisfactorily (Peart, 2007b), and an intensive follow up investigation in 2016 (n=48) reported that 38% felt that the RMA has not achieved its environmental goals, with another 60% feeling that the RMA had only partly achieved them (EDS, 2016: 42). A litany of complaints and analyses have been put forward to explain this situation. Here I focus on two.

2.5.3.1 Unforeseen costs of implementation

Practitioners have noted that unforeseen costs and delays in the RMA planning process have caused the actual implementation of the RMA to take many years. Consider that both RPSs and plans tend to go through processes of initial public consultation, followed by notification of a draft, followed by a submission period, and then a notified decision, which then can receive multiple appeals through Environment Court before becoming operative. Given that RPSs contain high-level policies whereas plans contain detailed rules, practitioners describe RPSs as ‘relatively ineffective’ documents (Consultant 2a, 2016), adding a costly layer of public submissions, hearings and court processes that provide very little certainty about environmental or economic outcomes. Plans, rather than RPSs, are the mechanisms that directly influence environmental effects, and yet plans are not even required by the RMA (MfE official 2a, 2016; Heitzmann, 2007).

The RMA’s strong provisions for public participation has seen Māori, industry, and environmental groups battling in Environment Court up and down the country, litigating RPSs, plans, and RPS/plan changes in their attempts to secure environmental and economic outcomes. These participation provisions have also meant that the cost to participate in legal

processes – as opposed to simply submitting texts – is high in terms of time, financial resources, and expertise. This has resulted in a sense of ‘consultation fatigue’ (Heitzmann, 2007: 159), as ‘elements of discursive democracy introduced by the legislation have subsequently been impaired by technocrapist legal formalism’ (Jackson and Dixon, 2007: 107; see also Oram, 2007).

This costly structure of legal process means that there is less resourcing available for monitoring and enforcing plan rules and consent conditions. In 2014/15, regional councils designated 47,535 consents as requiring monitoring, of which only 49% were monitored. In Canterbury, where water extraction and pollution are perhaps the most severe in the country, only 47% of the 12,230 consents that require monitoring are actually monitored (MfE, 2018a). Regional councils lack resourcing to conduct monitoring, and have not received any resources from central government for this task (Crawford, 2007; Brown, 2017). Additionally, Environment Court has historically lacked adequate resourcing, though this is improving. From 2500 cases pending in 2003, in 2016 there were only 384 (Heitzmann, 2007; Registrar of the Environment Court, 2016). For Māori, capacity constraints have been a major barrier to substantive participation in resource management (Crawford, 2007).

5.3.2 Ignoring cumulative environmental effects?

Despite the RMA providing a foundation for explicitly identifying and preventing deleterious environmental effects, New Zealand’s freshwater ecosystems have been drawn down (sometimes disastrously) and polluted past visible ecological thresholds. There are three broad explanations for this situation. The first is that resource consents, and their associated assessment of environmental effects, are processed on a case-by-case basis, and as such it has proven difficult to reject any single consent based on ‘significant’ environmental effects. As one veteran practitioner put it, ‘the way in which the Act is constructed, you cannot turn something down because of the incremental change that arises from the additional amount of

resource use from that. Unless you set a limit, you can't turn it down' (MfE official 2a, 2016). A consultant recalled that:

Federated Farmers very successfully ran a line that... 'we don't believe that its us, we don't believe that you've got the right solution to this problem' or 'you can't demonstrate the linkage here, that this solution will fix this problem'. They used the effects-based narrative and the need for proof as a justification for not regulating farms. (Consultant 2a, 2016)

Since financially-powerful consent applicants could afford to hire top scientists to argue that their proposal was not going to *significantly* degrade the ecosystem, this led to what Peart (2007a) calls a 'mitigation mentality', where council consent staff would tend to approve consents so long as efforts were made to mitigate, remedy, or avoid negative environmental effects. This mitigation mentality came to dominate and crowd out an alternative interpretation of the RMA, which could have seen the Court instead place burden of evidence on resource applicants to prove that their activity would not harm the ecosystem in significant way (Consultant 2b, 2016).

A second part of the cumulative effects problem is that in order to reject a consent due to the crossing of a significant environmental effect threshold, a maximum level of resource use had to be constructed scientifically. This concept of an ecological threshold or 'limit' is now understood to be a core part of governing for cumulative effects, and yet there was very little scientific or policy guidance on how such a concept might be operationalized (Consultant 2b, 2016; MfE official 2a, 2016). Practitioners from regional councils bemoaned that such guidance 'has been missing for a long time' (Hawkes Bay planner 2a, 2016). Thus, a lack of scientific and planning tools to regulate with limits has also contributed to the mitigation mentality.

A third aspect explaining the ineffective protection of freshwater from cumulative effects under the RMA lies in what the Environmental Defence Society and others have called ‘agency capture’ (EDS, 2016). This refers to the dominance of agricultural interests within regional councils and the subsequent steering of council culture and priorities. This arises through two mechanisms. The first mechanism involves the steering of formal policies such as RPSs and plans by the electoral priorities of elected regional councils, who tend to be overrepresented by agricultural and industrial interests (e.g. see McNeill, 2016). In the processes of making RPSs and plans, internalization of agricultural interests by council staff has led to a strategic setting of objectives that specifically exclude effects of agricultural land use such as conversion to dairy or intensification of dairy farms. For example, in the late 90s and early 2000s, environmental NGO Ecologic took the agriculture-dominated Waikato Regional Council to Environment Court for failing to identify diffuse pollution from agriculture as a ‘discharge’ requiring a consent under the RMA (Consultant 2a, 2016). By not specifying diffuse pollution as requiring a consent, Waikato’s plan permitted massive blocks of land in the region to be converted from exotic forestry to dairy farming, resulting in major nitrogen, phosphorous and *E. coli* increases into the regions waterways (Waikato Regional Council staff 2a, 2017).

Another mechanism of agency capture lies in the steering the operational functions of councils by politicians as well as by bureaucrats internalizing agricultural interests (e.g. see Stewart, 2016). This can be seen in the selective interpretation, monitoring, and enforcement of a council’s own rules and policies. Studies by the Office of the Auditor-General (2011), MfE (2016a), and a major review by EDS (2016) found overreaching by elected councillors into the operation of the RMA functions of council, including the issuance of consents and the enforcement of consent conditions. Council bureaucracies have also been criticized for selective implementation of their plans in favour of agricultural interests. In an infamous recent example, Horizons Regional Council’s 2014 plan included rules controlling fertilizer use based on estimated effects from the nitrogen modeling tool Overseer® (see Chapter 5).

By the time Horizons' plan became operative, the science involved in Overseer® had become more conservative, which meant that stronger restrictions on fertilizer use would be required to realize the plan's environmental objectives. Horizons responded by not requiring farmers to abide by the stronger restrictions, so Fish and Game and the Environmental Defence Society took Horizons to Environment Court in 2016, and won, thus forcing Horizons to implement their own plan⁴.

2.5.4 Evaluating the RMA: diverse failures, but a common solution?

Regardless of whether the RMA is flawed or its implementation is to blame, most agree that the resource management system is clearly not achieving 'the sustainable management of natural and physical resources' (RMA Section 5). Practitioners have identified multiple reasons for this: the significant costs of implementing the RMA, the uneven ability to marshal scientific evidence for RMA decision making processes, the lack planning tools to set and enforce biophysical limits, and the capture (or at least steering) of regional council functions by agricultural industry and development interests. For this diversity of problems, practitioners have offered an array of solutions, ranging from streamlining the RMA to reducing costs through to abolishing regional councils and replacing them with an independent Water Commission responsible for issuing consents and ensuring enforcement (Turnbull Group, 2009; LAWF, 2010). However, a common refrain from across the political spectrum has been that the failings of the RMA have been due in significant part to a lack of direction provided to regional councils by central government through the mechanism of a National Policy Statement (interviews, D. Parker, 2016; E. Sage, 2016; Former senior parliamentary official 2a, 2016; Hawkes Bay planner 2a, 2016; MfE official 2a, 2016; K. Hackwell, 2017; and see also EDS, 2007; Smith, 2007b; Rouse et al., 2016; Knight, 2018). RMA architects Tony Randerson (2007) and Geoffrey Palmer (2013) argue that the

⁴ Wellington Fish and Game Council v Manawatu-Wanganui Regional Council [2017] NZEnvC 38 (21 March 2017).

implementation of the RMA was always intended to be guided by national direction from the Minister for the Environment, and they emphasise that such direction never came. Indeed, for the first 20 years of the RMA, only a single National Policy Statement was enacted – the Coastal Policy Statement 1994 (updated 2010).

2.6 Freshwater as a national policy project

The collective critique of the RMA had converged around a specific policy mechanism – i.e. a National Policy Statement – as the most obvious and appropriate way to address the cumulative effects problem. Since 1999, successive governments have mobilized the mechanism of a National Policy Statement for Freshwater Management to selectively assemble, frame, and respond to public concerns about freshwater. This section outlines the origins of the National Policy Statement within Helen Clark’s centre-left fifth Labour government (1999-2008), before detailing the actions of John Key’s centre-right fifth National government (2008-2016, led by Bill English 2016-7). Tracing the contest over and evolution of this policy illuminates how the concepts contained within the NPSFM are interpreted in the context of wider state and societal developments.

2.6.1 Freshwater policy low on the agenda: the fifth Labour government, 1999-2008

The Clark Labour government has been praised for its social and economic policy, and for naming ‘neoliberalism’ as an object and enemy, all of which has been debated among leftists (Larner et al., 2007; Roper, 2015). A government staffer at the time recalls that ‘They had a big focus on social policy, and a bit of a focus on economic policy, but very little on the environment’, evidenced in part by the fact that the environment portfolio was given to the 20th ranked member in cabinet, Marion Hobbs (Former senior parliamentary official 2016).

While the fifth Labour government did not enact a freshwater NPS during its three terms, it produced a draft NPS on freshwater management. During David Parker’s 6-week stint as

acting Environment Minister in 2007, he recalls feeling that ‘MfE was just completely at sea with what to do with freshwater quality.’ Parker contracted a solicitor to draft an NPS on freshwater quality, instructing that ‘at heart... it needed to prescribe a minimum standard for freshwater bodies that was a swimmable standard’ (interview, D. Parker, 2016). Months after giving back the environment portfolio, Parker recalls that ‘all of the forces of darkness on water quality from other government departments came out and relitigated what was in that document’. Parker says this required him to expend political capital to draw cabinet’s attention to the importance of the original proposed provisions. Eventually cabinet agreed on a compromise text and submitted the draft NPS to a Board of Inquiry.

The RMA allows government to submit National Policy Statements to an appointed panel called a Board of Inquiry for independent advice. This Board of Inquiry was chaired by retired Environment Court judge David Sheppard. The Board reported back in 2009 and published its recommendations in 2010, well into John Key’s fifth National government (Board of Inquiry into the Proposed National Policy Statement for Freshwater Management 2010). Parker recalls:

[T]he Judge Sheppard National Policy Statement... effectively said ‘clean water bodies ought not to be allowed to get dirtier, dirty water bodies ought to be cleaned up over a generation. In order to effect that change, until you’ve got adequate rules in plans to control things getting worse, you need to have - through the National Policy Statement - a rule inserted into all plans that says that increases in land use intensity should no longer be a permitted activity.’ And he was right, it was a very elegant solution. (interview, D. Parker, 2016).

A consultant at the time recalls the politics of this manoeuvre:

Part of the point of it was to put in train this process with a very good Board of Inquiry that was going to then turn around and say ‘actually we need to strengthen all

these different parts of the NPS'. Labour then doesn't collect all the flak for having proposed this stuff in the first place prior to the election, but they set in train a process through which a Board of Inquiry is going to recommend some much more rigorous stuff. Whether that's what they intended or not, that's what happened. The Board of Inquiry recommended a really good NPS. (Consultant 2a, 2016)

The draft NPS addressed the problem of cumulative effects in part by bringing land use intensification more explicitly within the responsibilities of councils. It would have required all land owners who wish to intensify their land use (and associated pollution) to apply for a resource consent (i.e. permit). In regions such as Waikato, some polluting land uses were previously classified as permitted activities which meant land use could be converted to these activities without explicit permission. The draft NPS closed this loophole by not allowing regional councils to classify polluting activities in this way. Perhaps unsurprisingly, the Board of Inquiry-recommended NPS found favour with environmental groups such as Forest and Bird (interview, K. Hackwell, 2017) and the Green Party (interview, E. Sage 2016), but caused 'a great deal of anguish' for primary sector organizations (Land and Water Forum secretariat 2a).

2.6.2 Whole-of-government freshwater reform: the fifth National government, 2008-2017

In contrast to Labour, John Key's fifth National government invested significant resources into freshwater policy development. A government staffer at the time remembers the prioritization of water as a constellation of electoral and economic Realpolitik:

Through that period you had the growing dirty dairying concern, and the Canterbury irrigation situation was developing on both sides of the ledger. You had very high dairy prices in 2007 and 2008... that kept New Zealand from a sovereign debt crisis. So the incoming National government really clearly understood that water,

irrigation, Canterbury, [were] driving the economy: very, very valuable. And obviously with the growing public concern, they could see that they were going to have to manage the politics of it pretty carefully. (Former senior parliamentary official 2a, 2016)

The freshwater policy arena has been aflutter with activity since 2008. The Land and Water Forum was created to guide the whole-of-government reform of freshwater regulation, multiple National Policy Statements have been issued, and other regulatory changes and investments in and around environmental policy have been made. The following sections trace key political developments and conflicts arising during the time periods leading up to the 2011, 2014, and 2017 versions of the National Policy Statement for Freshwater Management. By looking at each iteration of the policy and the milieu in which it was enacted, we can see which public concerns have been incorporated by the state into policy, and how.

2.6.2.1 NPSFM 2011: forcing regions to set limits

When John Key's fifth National government was elected in 2008, incoming environment Minister Nick Smith (who has a PhD in geomorphology) had to respond to the Sheppard Board of Inquiry, and issue a decision on the draft freshwater NPS. As it happened, Minister Smith already had a plan to roll out a different mechanism for forming and legitimizing freshwater policy. It would be called the Land and Water Forum.

In the mid-2000s, prominent environmentalist, RMA-architect, and researcher Guy Salmon, with other researchers from Ecologic, undertook a comparative study of Swedish, Danish, and Norwegian environmental governance institutions and processes. Salmon returned home with a transformed understanding of where the RMA had gone wrong and what might be able to fix it (Salmon, 2007a). These Nordic countries provided models of 'collaborative governance', where multi-stakeholder groups of environmental actors could generate

consensus on policy architectures and priorities, and this consensus could provide continuity and certainty across successive national governments (Salmon, 2007a). In the context of regional councils' failure to deliver environmental outcomes under the RMA, Salmon proposed that a national stakeholder collective could resolve some difficult distributive decisions and generate enduring policy solutions, taking the heat off central government and potentially resolving the legitimacy deficit of regional councils (Salmon, 2008). Salmon's work influenced Nick Smith's thinking (e.g. Smith, 2006; Smith, 2007b) and Salmon's presentation at the 2008 Environmental Defence Society conference in Auckland has become a common point of reference in the environmental community as a key source of New Zealand's collaborative turn in freshwater management. Consider, for example, that seven interviewees – including sitting members of parliament – explicitly mentioned Guy Salmon by name when discussing the milieu of New Zealand freshwater policy.

At the 2008 Environmental Defence Society conference, an informal body was created to eventually advise government, and in 2009 this group was named the Land and Water Forum (LAWF). The LAWF was given terms of reference by Minister Smith to make recommendations (by consensus as much as possible) on the nature of freshwater management needed for New Zealand (see LAWF, 2010). The LAWF initially consisted of 58 organizations including iwi representatives, industry groups (e.g. Fonterra, Federated Farmers), environmental organizations (Forest and Bird, Fish and Game, the latter choosing to be an 'active observer' rather than a participant in consensus statements), local governments, infrastructure providers, university scientists, recreation groups, and others. Alastair Bisley, a former trade negotiator, was appointed to chair the LAWF, which met frequently over its first phase of work to deliver its 68-page *Fresh Start for Fresh Water* report to government in 2010 (LAWF, 2010). This report included 53 recommendations, covering everything from setting biophysical limits for waterbodies through to promoting collaborative governance arrangements and creating a national Land and Water Commission which would include an equal number of Crown-Māori Commissioners and would report to

the government. The 2010 LAWF report stands as a major turning point in New Zealand's freshwater management regime; unlike the submission process under the RMA where organizations submit separate feedback to the government about a specific policy, the LAWF report comes with a broad seal of consensus across civil society groups. Minister Smith deferred his response to the Board of Inquiry until after the LAWF report had been published and analysed (LAWF, 2010: 61).

Parallel to the LAWF developments, a major legislative change in New Zealand's environmental democracy requires discussion. Based on the argument that the regional council in Canterbury (Environment Canterbury or ECan) was not discharging its functions to effectively manage water, the fifth National government passed the ECan (Temporary Commissioners and Improved Water Management) Act 2010, which dismissed the elected regional council and replaced them with central government-appointed Commissioners. ECan did not have an elected regional council between 2010-2016, and since 2016 it has been in a transition period with half of the Commissioner slots given back to elected regional councillors, and a plan to have a fully elected council in the 2019 regional elections (Environment Canterbury [Transitional Governance Arrangements] Act 2016). The implications of this Act for freshwater management and environmental democracy in New Zealand have been critiqued by others (Thomas and Bond, 2016; Kirk et al., 2017), and are discussed at relevant points in this dissertation.

In May 2011 the government responded to the LAWF recommendations by gazetting the National Policy Statement for Freshwater Management 2011 (New Zealand Government, 2011). Most significantly, the 2011 NPSFM requires regional councils to set enforceable water quality and quantity limits for all waterbodies within their jurisdictions, and create plans to achieve them. Crucially, it devolves responsibility or limit-setting to regional councils, rather than setting national standards for environmental protection. The LAWF's very first recommendation to government in 2010 was that 'Central government should define national

objectives for the state of our waterbodies and set an overall timeframe within which they will be achieved' (LAWF, 2010: 1), yet such national objectives were notably missing from the NPSFM 2011. Instead, regional councils were directed to determine limits based on 'local and national values', where national values consisted of 19 generic topics such as irrigation, drinking water, historical heritage, recreation, and traditional relationships of Māori with fresh water (see Table 6). Additionally, while the LAWF recommended collaborative governance as a framework for water management, the 2011 NPSFM did not require a specific process for regional councils to engage with communities to set limits. The 2011 NPSFM thus presents a selective response to the LAWF recommendations and to the problem of limits and regional governance. The government also rejected the provisions recommended by the Labour government regarding a halting of intensification, and instead forced councils to set limits without the use of that mechanism. Councils were required to implement the policy by 2030, and the Minister for the Environment was required to seek an independent review of the policy by May 2016 (five years after gazetting the NPS). Six months after the NPSFM was gazetted, MfE published a 50-page implementation guide to aid in interpretation of the policy (MfE, 2011).

2.6.2.2 NPSFM 2014: instituting national bottom lines

In response to public outcry over the lack of ecological bottom lines to protect waterways, Nick Smith asked the LAWF to advise on how a limits-based regime might work with national bottom lines. LAWF's 92-page second report and a 113-page third report elaborated the Forum's consensus on what such a regime might include (LAWF, 2012a, 2012b). Responding to the LAWF's first three reports, the Ministry for the Environment published a report titled *Freshwater Reform 2013 and Beyond* (MfE, 2013a), which outlined the government's proposals for comprehensive reform to the freshwater regulatory regime. These proposals involved 1) promoting collaborative community planning processes (as recommended in LAWF 2010 and again in detail in LAWF 2012a), 2) instituting a National Objectives Framework to specify and enumerate national bottom lines for freshwater, and 3) outlining

central government support for helping councils shift to a limits-based regime for freshwater management, including the production of guidance by central government and investment into capacity-building across regional councils.

The 2013 MfE report introduced a normative model for ‘planning with community’ which provided guidance for interpreting the government’s freshwater reform activities. In a cartoon replete with community members of distinct occupations and myriad land use practices, an ideal policy cycle is presented (see Figure 4). First, a community group comes together and looks up at a table of national ‘values’, picking one (e.g. ecosystem health). This value is then broken down into specific ‘attributes’ (such as periphyton or fish) which can be measured. After selecting ‘periphyton’ (i.e. algae/slime), the community then reflect on the current state of this attribute, and consider which land uses cause this state. They then ‘Decide on what limits need to be set and what management options are required’ (MfE, 2013a: 28) to achieve the desired state for that attribute. This would be guided by nationally determined ‘bands’ for different attributes (i.e. A grade, B grade, C grade, D grade). Only a band that is the same or improved for that attribute may be selected. The community then consider the costs and benefits of reaching the desired state of an attribute, and can either say yes or can rethink their chosen value and/or bands.

The 2014 NPSFM gazetted in July 2014 gave force to MfE’s vision (New Zealand Government, 2014). While it contained several differences to the 2011 version, its primary contribution was the introduction of the National Objectives Framework. The National Objectives Framework prescribes maximum allowable states for two national values (ecosystem health and human health for recreation) that apply to each ‘freshwater management unit’ (see Table 6). For ecosystem health to be achieved, monitoring sites must report within specified numerical bands for attributes such as total nitrogen, periphyton, and dissolved oxygen. For human health, measurements of *E. coli* and cyanobacteria must be kept below certain numerical bands. Importantly, the minimum acceptable state for *E. coli* permitted a high (>5%) risk of

infection for activities involving immersion (New Zealand Government, 2014: 31). A list of eleven non-compulsory national values are contained in an appendix, which includes mahinga kai (customary food collection) and wāhi tapu (ceremonial practices)(see Table 6). In addition, the 2014 NPSFM also added a statement acknowledging ‘Te Mana o te Wai’ (New Zealand Government, 2014: 6), foregrounding the indigenous valuation of the intrinsic integrity (mana) of the water (wai) itself.

Figure 4. Planning with community diagram. Reproduced with permission. Source: MfE (2013a).

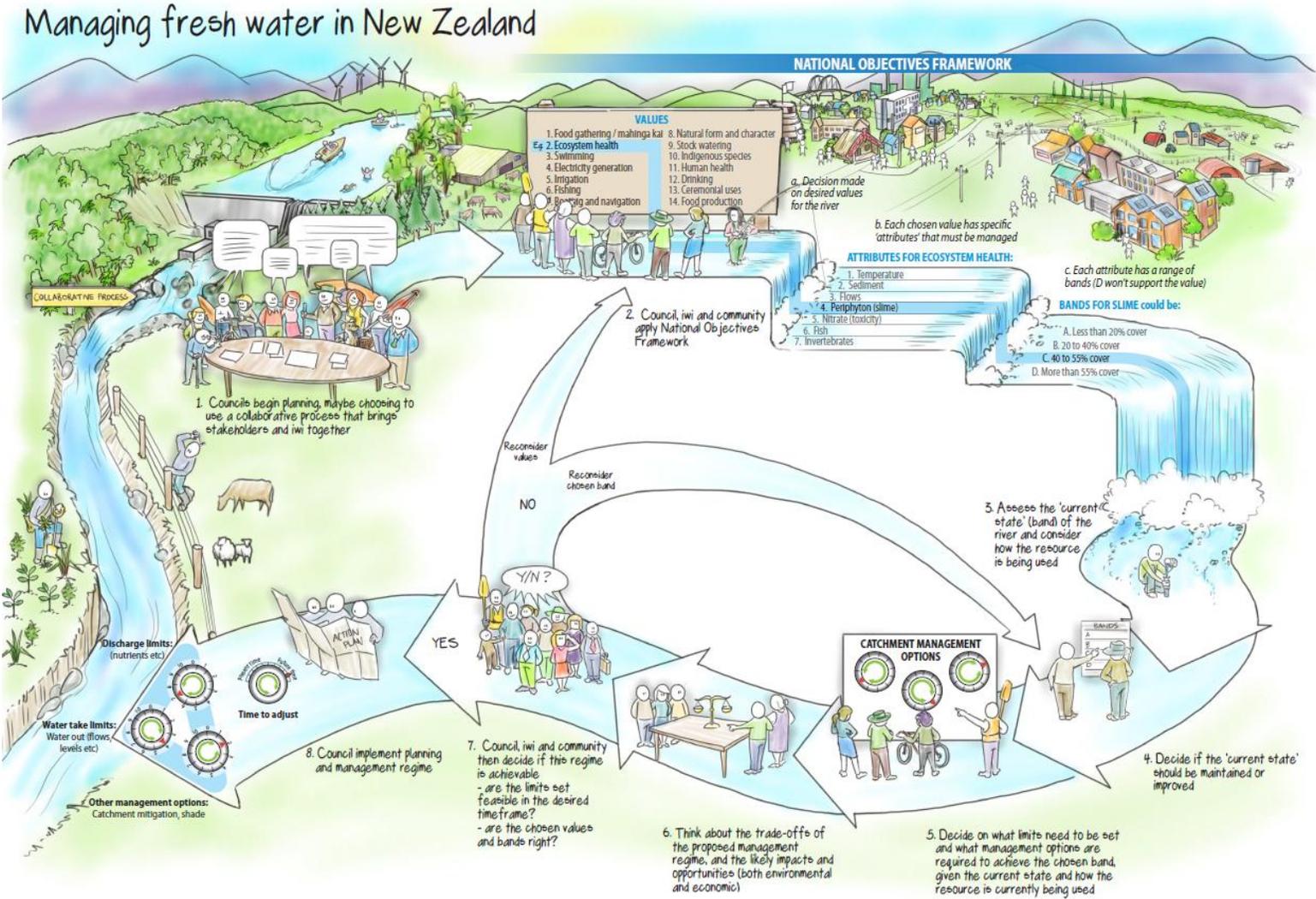


Table 6. Compulsory and non-compulsory national values in NPSFM 2014 (New Zealand Government, 2014).

<p>Compulsory national values</p> <p><u>Ecosystem health</u></p> <ul style="list-style-type: none"> • Attributes measured for lakes: phytoplankton, total nitrogen, total phosphorous • Attributes measured for rivers: periphyton, nitrate (for toxicity), ammonia (for toxicity), dissolved oxygen <p><u>Human health and recreation</u></p> <ul style="list-style-type: none"> • Attributes measured: <i>E. coli</i>, cyanobacteria
<p>Non-compulsory national values (no attributes specified)</p> <p><u>Natural form and character</u> – Where people value particular natural qualities of the freshwater management unit.</p> <p><u>Mahinga kai (i)</u> – Kai are safe to harvest and eat.</p> <p><u>Mahinga kai (ii)</u> – Kei te ora te mauri (the mauri of the place is intact).</p> <p><u>Fishing</u> – The freshwater management unit supports fisheries of species allowed to be caught and eaten.</p> <p><u>Irrigation and food production</u> – The freshwater management unit meets irrigation needs for any purpose</p> <p><u>Animal drinking water</u> – The freshwater management unit meets the needs of stock.</p> <p><u>Wai tapu</u> – Wai tapu represent the places where rituals and ceremonies are performed.</p> <p><u>Water supply</u> – The freshwater management unit can meet people’s potable water needs.</p> <p><u>Commercial and industrial use</u> – The freshwater management unit provides economic opportunities to people, businesses and industries</p> <p><u>Hydro-electric power generation</u> – The freshwater management unit is suitable for hydro electric power generation</p> <p><u>Transport and tauranga waka</u> – The freshwater management unit is navigable for identified means of transport.</p>

The meaning of the bottom lines included in the 2014 NPSFM need to be interpreted within the wider program of government activities. In particular, ongoing and massive investments in agriculture, the reorganization of public science to subsidize agricultural profitability, and the privatization of water all effect the interpretation of provisions within the NPSFM. First, while the LAWF work and freshwater reform agendas were in motion, in 2012 the Ministry for Primary Industries publicly advertised its goal to double the real value of agricultural exports from \$32B to \$64B by 2025, as a part of the whole-of-government Business Growth

Agenda. This number, along with the provision of major public funding by MfE for private irrigation schemes, has been cited by environmentalists as directly contradicting the objective of cleaning up waterways (e.g. Joy, 2015). Even the OECD has criticized this export policy as fundamentally contradicting the governments stated aspiration to improve water quality:

It is unclear how the twin objectives of reducing environmental impacts and doubling primary industry exports in real terms will be achieved, and whether the government assessed use of finite freshwater resources and impacts on water quality before setting such objectives. (OECD, 2017b: 156-157)

Second, alongside this agricultural strategy, then-Minister for Science and Innovation Steven Joyce reorganized the government funding of environmental research around ‘mission-oriented science goals’ (Joyce, 2012). Instead of funding environmental research on a project-by-project basis, the government would put most of its funding into a single \$100M, 10-year project with an explicit aim ‘To enhance primary sector production and productivity while maintaining and improving our land and water quality for future generations’ (<http://www.ourlandandwater.nz/the-challenge/>). Thus, the organization of science in New Zealand had been reconfigured toward subsidizing the continued profitability of agricultural industry.

Third, as outlined in Section 2.3, in 2013 the government sold 49% many state-owned assets including Mighty River Power. The Waitangi Tribunal hearing leading up to this concluded that Māori had ‘proprietary’ rights and interests in water that were equivalent to those of the Crown, and that any assertion of property (e.g. as required for sale to occur) must first address and legally clarify Māori rights and interests in water. The Prime Minister and the government claimed the common law position that ‘no one owns water’ (Young, 2012) and proceeded with the sale. Reading these developments alongside in relation to the addition of Te Mana o te Wai into the NSPFM, it appears that with one hand the government added symbolic language into freshwater policy recognizing Māori relationships to water, while

with the other hand it refused to recognize Māori rights and interests in water as declared by the Tribunal (Ruru, 2013).

The 2014 NPSFM responds to the perceived lack of environmental protection of the 2011 version by instituting national bottom lines through the National Objectives Framework. This fundamentally centralized control over regional decision making processes by forcing all regional councils to articulate quantitative limits for the nine biophysical attributes specified in the new policy, as well as requiring compliance with the maximum allowable levels for these attributes in cases where they are exceeded. The National Objectives Framework is a selective response to the problem of nationally inconsistent environmental protection through the planning system, highlighting nine variables and requiring their measurement and management. The addition of Te Mana o te Wai within the policy document provides a further government response to the problem of Māori rights and interests in freshwater and its governance. At the same time, however, it was also refusing to acknowledge the proprietary interests of Māori in water.

2.6.2.3 NPSFM 2017: the politics of swimmability

The introduction of the National Objectives Framework spurred considerable debate across scientific and policy communities. Several prominent freshwater scientists agreed that the Framework represented a significant step forward in securing environmental bottom lines, but there was dissatisfaction with the substance and ambition of the Framework. Concerns were raised that:

- the bottom lines were far too permissive for humans and non-humans,
- important ecological variables such as water temperature and sediment were not included,
- biological indicators were needed in addition to chemical measures,
- wetlands and estuaries were not protected, and

- improving ‘overall’ water quality ‘within a region’ allowed for spatially concentrated degradation (Science Media Centre, 2014).

Outside of government, environmentalists latched onto the language describing the *E. coli* bottom line in the 2014 NPSFM. Waterbodies complying with the *E. coli* bottom line of 1000 bacteria per 100mL of water were considered suitable for ‘activities with occasional immersion and some ingestion of water (such as wading and boating)’ (New Zealand Government, 2014: 31). The 2014 NPSFM thus became synonymous with setting the national standard at the level of ‘wadeability’, which was clearly not aspirational and which went against many New Zealanders’ understandings of New Zealand as a clean and green environment, economy and nation. A grassroots group called Choose Clean Water campaigned across the country for a swimmable aspiration for water. They pressed the Minister in public forums and the popular press, rallying environmental commentators and raising public awareness, culminating in a 12,000-signature petition that was delivered to parliament in 2016 alongside thousands of blue paper drops in the shape of a river, representing the signatories (Burry, 2016). Related campaigns from the Green Party, public intellectuals such as Dame Professor Anne Salmond (2016), and a growing chorus of critical commentary from across business, science, and policy communities, collectively pushed the Minister to becoming ‘open-minded’ about clarifying that the NPS would lead to increased swimmability, though he felt the existing NPSFM 2014 would already have led to more swimmable waterways through its requirement to ‘maintain or improve’ freshwater quality (Mitchell, 2016).

In February 2017, the government proposed amendments to the 2014 NPSFM (MfE, 2017a), with a press release boldly promising ‘90% of rivers and lakes swimmable by 2040’. Upon scrutiny, observers noted that that the way the government classified swimmable rivers had changed, and environmentalists accused the government of chicanery (Small and Mitchell, 2017). The Ministry had developed a complicated statistical procedure in which the median *E.*

coli count of a river was related to the amount of time that it exceeded the attribute bands of the NPSFM 2014. Swimmability was no longer measured by comparing a single number (median annual *E. coli*) to another number (the bottom line); the bottom line had been redefined to integrate a temporal weighting (Hansford, 2017; Webster-Brown, 2017). NIWA scientists calculated how many waterways would be designated as swimmable under the existing 2014 versus proposed 2017 bottom lines, and found that under the 2014 standards only 30% of waterways would be considered swimmable, compared to 43% under the new time-integrated grading system (Gudsell and Bramwell, 2017). Thus, the government had made 13% of the country's waterways swimmable overnight through definitional fiat.

In addition to criticizing the level of the swimmability standards, environmentalists have also criticized how the swimmability targets exclude small streams (interview, K. Hackwell, 2017; public meeting notes, N. Smith, 2017). In a public meeting in Wellington, Green MP Catherine Delahunty argued that the swimmability maps produced by government are only for two variables (*E. coli* and cyanobacteria), and they do not include many things that affect swimmability such as sediment. Minister Smith conceded that other variables do affect swimmability, but argued that the new swimming maps provide members of the public with more information to make decisions about how much risk they are prepared to live with (N. Smith, public meeting transcripts, 2017). Indeed, the government intended to support a shift to swimmability by publishing the most-up-to-date information on *E. coli* and cyanobacteria to the public through a web-based interactive map (MfE, 2017a). The proposals for swimmability, seen in this light, are about more than just targets of bacteria levels. They are also about constructing individualised swimming 'subjects' who are intended to become responsible for the risks of swimming that the maps describe. In March 2017, the day after Nick Smith presented his policy proposals to a public meeting in Wellington, the Choose Clean Water campaign ran a billboard in central Wellington critical of the more permissive swimmability definition. The billboard featured a picture of a child standing over water and

looking into it, with bold text: ‘The government thinks you won’t notice more poo in your water’ (Cann, 2017).

The 2017 NPSFM gazetted in August 2017 compels regional councils to monitor and publicly report on the swimmability of waterways in their regions. It requires them to provide a plan for how they will increase the swimmability of waterways in their region to 80% by 2030 and 90% by 2040 (New Zealand Government, 2017). The new time-integrated swimmability monitoring applies to all rivers that are longer than 1500m and at least 40cm in depth. In addition, some changes have been made clarifying avenues for Māori participation in decision making, and new clauses have been added specifying that nitrate and phosphorous levels for algae blooms should be taken into consideration (but are not included numerically). Further, a biological indicator, the Macroinvertebrate Community Index, has now been made compulsory for councils to measure and report upon, and if a stated numerical threshold is breached a regional council must prepare a remedial action plan. The contributions of the 2017 NPSFM for limit-setting and Māori participation are summarised in Table 7 and compared to the 2011 and 2014 versions of the policy.

Table 7. A summary of three versions of the National Policy Statement for Freshwater Management.

	2011 National Policy Statement for Freshwater Management - limits	2014 National Policy Statement for Freshwater Management – ecological bottom lines	2017 National Policy Statement for Freshwater Management - swimmability
Primary function	<p>Requires regional councils to set ‘enforceable water quality and quantity limits’ (p3) for waterways, with councils ‘imposing conditions on discharge permits to ensure the limits... can be met’ (p6). The aim of these regulations is to ensure that ‘The overall quality of fresh water within a region is maintained or improved’ (p6).</p> <p>Councils must identify overallocated waterbodies and propose methods to phase out overallocated situations.</p>	<p>Establishes the National Objectives Framework. This includes numerical thresholds for nine chemical attributes. No attribute in New Zealand may fall below the national bottom line. <i>E. coli</i> threshold set for ‘wadeability’ at 1000 bacteria per 100mL.</p>	<p>Compels regional councils to monitor and publicly report on the swimmability of waterways in their regions, and provide a plan to government for how they will improve the swimmability of waterways in their region to 80% by 2030 and 90% by 2040 (New Zealand Government, 2017).</p>
Secondary function	<p>Such limits ‘must reflect local and national values’ (p3). A bullet-point list of national values is provided, including 11 uses such as domestic drinking water, electricity generation, and irrigation, and a second list of ‘water’s intrinsic values’ (p3) including healthy ecosystem processes, cultural relationships of Māori with freshwater, among others.</p>	<p>Numerical attribute bands ensure that water quality is ‘maintained or improved’, as any attribute must not fall into a lower numerical band.</p> <p>Standardises local planning processes by requiring numerical limits for specified attributes.</p>	<p>Clarifies that ecological effects of nitrogen and phosphorus in addition to human toxicity need to be considered in the limit-setting process.</p> <p>Macroinvertebrate Community Index must be measured for all freshwater management units, and regional councils must ‘seek to improve on a Macroinvertebrate Community Index score if it is below 80’ (p21).</p>

<p>Māori rights and interests</p>	<p>Regional councils must 'take reasonable steps to...</p> <ul style="list-style-type: none"> • involve iwi and hapū in the management of freshwater... • work with iwi and hapū to identify tangata whenua values and interests... and... • reflect tangata whenua values and interests in the management of, and decision making regarding, fresh water and freshwater ecosystems in the region' (p10). 	<p>The NPSFM now contains a statement acknowledging 'Te Mana o te Wai' (p6), foregrounding the indigenous valuation of the intrinsic integrity (mana) of the water (wai) itself.</p> <p>Māori values such as mahinga kai (customary food collection) and wahi tapu (ceremonial practices) are added to the list of non-compulsory national values.</p>	<p>No change to 2014 version. Parallel 2017 changes to the RMA allow iwi to initiate 'participation agreements' between iwi and councils</p>
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Ultimately, the 2017 NPSFM responded to the accusations of weak environmental standards in the 2014 version by forcing regional councils to measure, report upon, and improve swimmability in their regions. Instead of raising the national ecological bottom lines, the government opted for a 'report and improve' approach focussing on swimmability as a specific culturally valued activity, and in response to a public concern that was carefully curated and boosted by environmentalists, public intellectuals, and elements of the private sector. Nevertheless, the strategic selection of variables used to represent swimmability has been fiercely contested. The state has also sought to patch up earlier gaps in the National Objectives framework by adding another mandatory ecological indicator (the Macroinvertebrate Community Index) and by adding an explanation to the nitrogen and phosphorous attributes. Through these amendments, the government has further clarified and elaborated its version of the freshwater 'problem' requiring implementation by regional councils.

2.7 Selecting and framing public concerns: five keywords in New Zealand freshwater policy

While an environmental policy may introduce novel concepts into the environmental governance landscape, such concepts must be recognizable to the communities tasked with implementing them. Even radical concepts must have a history, and this history will affect their interpretation. Previous sections have sketched the colonial, scientific, political-economic, and regulatory dimensions of the freshwater 'problem' in New Zealand. These problem-dimensions are woven through the language of the National Policy Statement, and have been codified through the strategic and selective use of specific keywords. Keywords are used to gesture out to a broadly accepted public problem, while also collapsing that problem into a specific defined entity. For example, the problem of cumulative effects and the need for national direction has been codified within the National Policy Statement through the language of limits, the enactment of the ecological bottom lines in the National Objectives Framework, and broad reference to 'local and national values'. These keywords can be

understood as the state's strategic and selective portrayal and response to wider public concerns.

In this concluding section, I discuss five prominent policy keywords within and surrounding the National Policy Statement that have emerged to organize conflict around freshwater politics. The NPSFM codifies complex public problems – of colonialism, ecosystems, economy, and regulation – through the keywords of 'rights and interests', 'limits', 'collaboration', 'local and national values', and 'swimmability'. Through these keywords, the state both accepts the existence and importance of these public problems, while at the same time defining these concerns in ideologically selective ways. These keywords have come to provide touchstones for debate in freshwater politics, and their precise meanings carry significant implications for the relationship between state policy and wider public problems. Empirically, these keywords act as a useful guide for readers to help decode the concepts and language of New Zealand freshwater politics in the chapters that follow. State and non-state actors vie for authority by mobilizing these keywords as proxies for the wider public concerns described in this chapter. Theoretically, these keywords provide a way of grasping the incipient structure of the institutional void within New Zealand freshwater policy. The NPSFM is a strategically selective state response to the various public problems of freshwater outlined in this chapter. Historical analysis allows us to unpack the interpretive context surrounding a new policy concept such as 'limits', situating the keyword within the context of the (contested and selectively formulated) problem that it has been intended to address.

Māori **rights and interests** in freshwater have been an object of legal contestation and uncertainty since the Treaty of Waitangi was signed in 1840. Though the RMA contained several provisions for iwi involvement in environmental management, often these were vague, and they ultimately hinged upon goodwill within council staff rather than being understood as a required part of a councils' core business (Crawford, 2007; Robb et al., 2015). Increasing iwi involvement in environmental management has been enabled more effectively

through the Treaty settlement process, as this carried with it resourcing to hire and train iwi resource management staff (Williams, 2007; Ruru, 2018). The sale of state-owned assets in 2013 forced the government to reassert its common law position that ‘no one owns water’, while acknowledging that Māori have special rights and interests in water that require recognition by the Crown. The LAWF advocated for further specifying Māori ‘rights and interests’ in freshwater as a matter of priority for the freshwater reform program (LAWF, 2015), and the Ministry for the Environment has described Māori ‘rights and interests’ as an ongoing priority (MfE, 2013a, 2017a). Through the 2011, 2014, and 2017 NPSFM as well as 2017 RMA reforms, further provisions for Māori participation in freshwater management have been added, though these do not address the Tribunal’s ruling that Māori have proprietary interests in water that are equivalent to economic ownership. In 2016, the Māori Council took another case before the Waitangi Tribunal to demand the recognition of proprietary rights guaranteed by the Treaty (Forbes, 2016; Williams, 2016). The nature of proprietary and non-proprietary Māori rights and interests in freshwater continue to be a major feature of freshwater policy discussion.

The contemporary idea of **environmental limits** is situated within a longer history of debate about the failure of the RMA and regional councils to manage cumulative environmental effects. The 2011 NPSFM introduced this concept into regulation, forcing regional councils to set numerical limits to resource use to protect water and its ecosystems. As noted in the Ministers’ foreword to MfE’s Freshwater Reform 2013 and Beyond, ‘this precious natural resource offers us significant potential for economic growth. But this will only happen if we use and manage water carefully within environmental limits’ (MfE, 2013a: 5). If New Zealand’s environmental policy community can succeed in limiting the cumulative effects of diffuse pollution in freshwater, this will legitimate the state in its domestic context and secure New Zealand’s competitive positioning in the international arena, from the marketplace of agricultural produce through to rankings of ‘livability’ (e.g. see MfE, 2017b). In the

practitioner community, limits have enjoyed wide consensus yet loose definition and varied interpretations (MfE, 2017e).

The terminology of **local and national values** refers to the balance between local discretion and national prescription in setting freshwater limits. The 2011 NPSFM required councils to set limits that ‘reflect local and national values’ (New Zealand Government, 2011: 3), while identifying eleven national values in a broad qualitative way. This gave regional councils significant discretion to define objectives and organize monitoring and compliance frameworks at the local scale. However, the National Objectives Framework in the 2014 NSFPM included two compulsory national values (ecosystem health and human health) and required all regions to measure and achieve specified attributes for these objectives. The National Objectives Framework provides the foundation for realizing MfE’s (2013a) ideal ‘planning with community’ model (see Figure 4), wherein communities are expected to specify local limits for each nationally-designated attribute. After scientific criticism of the narrowness of the National Objectives Framework, the 2017 NPSFM added a biological indicator to the list, and some qualifying language about how existing nitrogen and phosphorous measurements should be interpreted. The 2017 NPSFM also forces regional councils to monitor and report on swimmability of rivers in a prescribed fashion. In these ways, what once began as a fully decentralized policy has slowly been recentralized, as more and more standardized requirements have been added to the policy. Early indications from the sixth Labour government are that they may further add and revise attributes to the National Objectives Framework, as well as providing a standardised template for ‘limits’ (Parker, 2018b).

Since the Land and Water Forum, **collaboration** has become a keyword in freshwater policy and environmental management in New Zealand (LAWF, 2010; MfE, 2015; Rouse et al., 2016; Sinner et al., 2017). Guy Salmon’s translation of Nordic experiences with collaborative governance into the New Zealand context have proved pivotal to mainstreaming a specific

vision of collaboration. The LAWF operationalized this vision for a specific purpose, assembling high-level political representatives from major sectoral interests and forcing them to produce a consensus on the direction for freshwater management in New Zealand. At the local scale, starting in Canterbury, regional councils took up the collaborative governance mantra with gusto. ECan, newly free from accountability to locally elected politicians, carved the region up into ten zones and created community collaborative groups to make recommendations on freshwater policy for each zone (see Nissen, 2014; Kirk et al., 2017). In Waikato, Hawkes Bay, Northland, and Wellington, and elsewhere, collaborative processes were set up to determine local objectives for freshwater for their regions (see Chapter 4). While the NPSFM does not require nor mention collaboration as a preferred mechanism of community engagement, the RMA was amended in 2017 to allow a tightly-defined version of collaboration to be granted special legal status.

Finally, while the **swimmability** of waterways has always been a concern for environmental advocates, since the release of the ‘wadeable’ standard in 2014 the concept of swimmability has come to centre stage in public debate about freshwater. From this mounting public pressure, Minister Smith became ‘open-minded’ about declaring an aspiration for swimmability, and in 2017 the revised NPSFM included a target of reaching 90% of rivers being swimmable by 2040. Not only does the revised 2017 NPSFM aspire to increased swimmability; it also forces regional councils to measure and report on swimmability regularly. Nick Smith himself wanted to make rivers and lakes *swimmable* not only in a physical sense, but also in the sense of creating citizen-subjects who see and utilize their waterways for swimming through the maps and metrics provided by the state, while deciding how much environmental risk to accept as a personal choice. Swimmability has thus emerged in public discourse as a significant scientific object as well as a political aspiration.

While the metaphor of an institutional ‘void’ might conjure images of a terra nullius of policy meaning, even radically novel policies have histories that shape their interpretive

possibilities. Limits should address the cumulative effects problem, iwi rights and interests should address the Treaty of Waitangi concerns, collaboration should address the agency capture problem. Rather than treating the terrain of freshwater politics as either flat or as chaotic, policy keywords provide structure to political demands and policy debates. Such keywords encourage us to think about how state and non-state actors attempt to refer to existing public concerns while also shaping what those concerns include. This can involve promoting keywords from outside of the state (swimmability, collaboration), arguing for different interpretations of existing keywords (e.g. rights and interests), and contesting whether existing keywords are valid referents of the problems they are supposed to address. This ongoing promotion, critique, and refinement of policy keywords provides a way of understanding how state and non-state actors seek to structure and influence the meaning of new policy concepts in an institutional void. In the chapters that follow, I will explore how differently scaled contemporary policy actors are drawing on their unique capacities and roles to structure the interpretation of the NPSFM as it is translated into practice.

Chapter 3 – State action for water policy implementation: coherent rollout of an ideological vision?

3.1 Introduction

Once the state has crystallized its objectives and methods into a policy text, what is there left for the state to do? Back in the days of ‘command and control’ regulation in Western liberal democracies, the central state bureaucracy might have then been responsible for implementing this policy as well (Benson and Jordan, 2017: 5). With the decentralization of policy implementation to local governments, however, the practices and outcomes of policy implementation are no longer strictly guaranteed to align with the state’s objectives. In response to this, many governments have undertaken a diverse array of non-prescriptive or ‘soft’ activities that selectively privilege certain methods and outcomes of policy implementation (Jarvis, 2012; Mol, 2016; Perkins, 2017b). Through the generation and circulation of guidance material, the provision of information, and the co-development of implementation programs with local governments, for example, the state bureaucracy can and does attempt to structure the institutional void of policy implementation. Understanding the nature of these reconfigured state activities – and elaborating on their material and democratic implications – is thus an urgent analytical and political task.

This chapter explores how New Zealand’s environmental state is attempting to influence the terrain of water policy implementation. What activities is the state undertaking to support water policy implementation, and what objectives are being sought through this process? In answering these questions, I will seek to make an empirical, analytical, and political contribution. Empirically, this chapter offers an account of the structure and function of New Zealand’s environmental bureaucracy, the Ministry for the Environment. Characterizing the Ministry’s activities around water policy will enable researchers and practitioners across the world to understand how New Zealand’s environmental state is set up, and how it might

differ from others, and what unique opportunities and constraints it might experience. Analytically, the chapter investigates whether and how the Ministry for the Environment's activities are configured around a coherent ideological agenda to structure the institutional 'void' (Hajer, 2003b) of policy implementation. By examining the specific projects and programs of implementation support undertaken by the Ministry, I consider whether and how these activities relate to – and might be explained by – environmental neoliberalism, and what other logics may guide policy action. Politically, this chapter advances a pragmatic agenda for working with/in the state for environmental justice and sustainability. After examining the logics and practices of bureaucrats within the Ministry, I resist calls for environmentalists to abandon the state as a site of political struggle, and instead call for environmentalists to enrich their activist repertoires by considering the specific factions, organizing logics, and actually-existing intentions that shape bureaucrats' activities in unique historical-geographical settings.

Section 3.2 proceeds by defining the environmental state and reviewing its study by critical social scientists. I argue that while 'broad-brush' studies of state action (Heyman, 2004) provide valuable foundations for understanding state logics and activities, they tend to reduce state intentionality to a singular, coherent, effective, and often malevolent logic, such as capitalism or colonialism. In contrast, fine-grained empirical studies of actual bureaucracies provide can characterize and explain state activities in ways that identify the discretionary and strategic agency of bureaucrats. Concepts and approaches drawn from anthropology, I contend, can support attempts to build an understanding of how politics within the environmental state actually works. Section 3.3 briefly recounts relevant aspects of my methodology and access to the Ministry for the Environment (MfE), and Section 3.4 outlines the history and administrative context of MfE as an organization within government. Section 3.5 describes the work of the bureaucrats tasked with supporting implementation of the NPSFM, and Section 3.6 situates this work within the broader activities of the Water Directorate, which is responsible for steering a whole-of-government approach to freshwater

regulation. Section 3.7 then scales up to examine the primary organizing logics and tensions of MfE, to think about how organizational practices are structured and how they change (or not). Section 3.8 deploys the dual lenses of constraint/agency to consider the relative capacity for action of differently situated state actors within the state bureaucracy. Section 3.9 concludes by revisiting the notion of the institutional void and reflecting upon the analytical and political utility of a fine-grained and broad-brush understandings of the environmental state.

3.2 Theorizing the environmental state

This section defines what is meant by the environmental state and reviews pertinent research and debates about it. After defining the state, I outline broad-brush explanations of state behaviour based in political economy (see Heyman, 2004), and I consider the merits of a fine-grained empirical approach to analysing the politics of the state bureaucracy.

3.2.1 Defining the environmental state

Sociologist Max Weber (1978) famously defined the state as a system of administration and law which claims legitimate interests over a population and territory, and, through wielding a monopoly of legitimate violence, can compel action. To police and enhance the welfare of the population, Weber argued that a powerful bureaucracy was needed. This bureaucracy would require a clear chain of command led by elected officials and use standardized protocols to ensure consistent administration of the law (see Heyman, 2004; Jessop, 2016). Much scholarship on the state – including the environmental state – draws a link from Weber to present (see e.g., Whitehead, 2008; Jessop, 2016). For purposes of this chapter, I define the environmental state as a system of government administration concerned with managing the biophysical environment and associated socio-environmental interactions (Duit et al., 2016).

The precise form and functions of environmental states need to be situated spatially and historically. This involves positioning the features of a case against wider observations of

state transformation. Historically, Meadowcroft (2012) observes that across the industrialized West, state *concern* for the environment has both broadened in terms of the spatial remit of environmental problems under its mandate, and deepened in terms of the increasing complexity of science and regulation needed to manage these problems. The environment has become an increasingly central and integral priority for states (Jordan and Lenschow, 2010), and the environment has become a relatively permanent focus of political action and struggle (Meadowcroft, 2012; Whitehead, 2017). The spatial structures of environmental states are also being reconfigured through *decentralization* (or denationalization, see Mol 2016). This involves the ‘scaling down’ of state responsibility for environmental protection to local administrative levels, the ‘scaling up’ of regulation to transnational policy and industry networks, and ‘scaling out’ environmental responsibilities to civil society (Reed and Bruyneel, 2010; Cohen and McCarthy, 2015). Environmental bureaucracies are increasingly connected and reflexive international actors, drawing policy ideas from other states and international organizations (Duit, 2014; Jörgens et al., 2014).

The regulatory practices and internal workings of environmental states are also changing. Mol (2016) observes that across the OECD, there is considerable variability in the size and scope of environmental bureaucracies, and that while many have been decreasing in staff numbers since the early 1990s, a few have remained stable, and some (such as the UK’s Environment Agency and New Zealand’s Ministry for the Environment) have increased in size. From previous use of top-down, command and control regulation (still evident in the US for Lejano and Funderburg, 2016), many environmental states are increasingly embracing market-based policy instruments (Lemos and Agrawal, 2006; Castree, 2011; Jordan et al., 2013), network-steering facilitation roles (Torfing et al., 2012; Klijn and Koppenjan, 2016), and non-interventionist forms of policy that rely less on compulsion and more on the production of guidance and incentives (Mol, 2016; Perkins, 2017b). As their regulatory approaches change, so too do their workforce capacities: Mol (2016) argues that

environmental bureaucracies have devalued specialist expertise in favour of mediation, communication, and management skills.

3.2.2 Explaining the state and its activities: broad-brush approaches

Many scholars have used what Heyman (2004) calls broad-brush approaches to understand the diverse activities of states. Such approaches ‘characterize all bureaucracies... as having similar tendencies, modes of thought, and patterns of action’ (ibid: 490). For Marx and Engels (1848), the state’s activities can be understood as a mechanism to secure bourgeois (upper class) interests in capital accumulation. Political economic perspectives drawing on Marx contend that the state’s function is to ensure capital accumulation within its territory while avoiding a crisis of legitimacy with its population (McCarthy and Prudham, 2004; Castree, 2008b; Ioris, 2015). The *environmental* state, within this argument, functions to secure economic growth for the upper classes of society while translocating and disguising ecological degradation. To achieve this, it is argued, the environmental state makes nature legible to capital and markets (Robertson and Wainwright, 2013; Meehan and Molden, 2015; Parenti, 2015; Collard and Dempsey, 2017), violently appropriates land and resources for capitalists (Smith, 2007a; Bridge, 2014), reinforces class-power through privileging certain concepts of nature (Robbins, 2000; D’Alisa and Kallis, 2016), and distributes the ecological effects of capitalism in racist and unjust ways (Collard et al., 2016; Pulido et al., 2016).

Critical scholars have identified several distinctive changes in the modus operandi of environmental states across the world (especially the industrialised West), which can be linked to the proliferation of neoliberalism as an economic and public policy doctrine (Heynen et al., 2007; Himley, 2008; Castree, 2010; Collard et al., 2016; Perkins, 2017a). For these scholars, the neoliberalization of environmental governance is a coherent project of policy reform built around (Castree, 2010):

- Private property rights

- Market-based institutions, e.g. commodification of nature
- Roll-back of state responsibilities and capacities for environmental protection (including decentralization without resourcing)
- Shift to private provision of public services
- Creation and promotion of self-sufficient individuals
- Shift from prescriptive regulations to ‘soft’ policy tools such as incentive and voluntary schemes (Jordan et al., 2013; Perkins, 2017b)

While theoretical arguments for characterising all of these changes together as *neoliberalization* have been elaborated and critiqued (McCarthy and Prudham, 2004; Castree, 2010; Collard et al., 2016), in practice the neoliberal script has become a common point of reference for scholars who observe one or several of these shifts in specific settings. The neoliberal script provides a way of connecting on-the-ground changes with powerful international networks and ideas about government, and identifying a coherent purpose behind otherwise disparate activities. In this way, the neoliberal script – in which the state acts to ensure economic growth and profit for some actors in society – provides a benchmark against which to analyse differences of experience (see Castree, 2008a).

On the one hand, it is crucial to identify the patterns of state activities and how they tend to be associated with certain social and environmental effects (Castree, 2008a; McCarthy, 2012). In this, rigorous and ongoing critique of neoliberal environmental policies, economic ideologies, and their associated assumptions, remains an urgent task. On the other hand, such all-encompassing critiques have led to the complete rejection of the state as a potential vehicle for environmental and social justice objectives:

Instead of seeing the state as a helpmate or partner, it [the environmental justice movement] needs to see the state as an adversary and directly challenge it (Pulido et al., 2016: 27)

Pulido et al. cite 'industry capture' (ibid: 17) of the state as a primary reason for the lack of state response to the concerns of the environmental justice movement, echoing the spirit of Marx and Engel's (1848) conclusion that 'The executive of the modern state is but a committee for managing the common affairs of the whole bourgeoisie.' In this view, the state is fundamentally captured by the interests of capitalists, and state policies are a universal (if spatially heterogeneous) expression of this relation. Pulido et al.'s injunction to reject and oppose the state in its entirety gives us cause to reflect: have critical scholars succeeded in explaining the environmental state and fully delimited its political possibilities?

3.2.3 Fine-grained studies of bureaucratic practices

Heyman (2004) argues that while broad-brush approaches are useful and indeed necessary, 'A totally critical framework does not allow space for constructive struggle with and against varied bureaucratic factions' (p491). An important complement to broad-brush analyses is what he calls particularistic or fine-grained studies of bureaucracies. Fine-grained studies of the internal workings of bureaucracies can map out how bureaucrats make decisions based on multiple personal, interpersonal, and organizational – as well as formal political – goals and values. 'A workable ethnography of a power-wielding organization has to take into account the life of the organization itself as it translates upper-level mandates down to the level of everyday practices' (Heyman, 2004: 489). By following the practices of bureaucrats as they interpret formal rules and official narratives, the aim is not to produce an evaluation of a 'successful' or 'failed' bureaucracy (Mosse, 2005; Hoag, 2011). Rather, the aim is to understand how bureaucratic action is shaped by formal and informal organizational metaphors, intra-organizational factions, professional identities, and personal values.

Analytically, fine-grained accounts help to understand how state activities are 'caused' by multiple forces, including – but not limited to – the political ideology of the Minister and government of the day. Politically, this opens up terrain of political struggle. Identifying the moments and qualities of bureaucrats' discretionary practices can support a strategic 'war of

position' (Gramsci, 1971) as bureaucrats with sustainability and environmental justice values seek to transform both the state and civil society. As one example, through creative mobilization of organizational metaphors and polysemic keywords in the U.S. Environmental Protection Agency, 'staff-level employees can and do craft counter-neoliberal content that will pass political review without objection' (Robertson, 2010: 8). Understanding how bureaucracies work enables environmentalists to think about their engagements with/in the state differently. As Heyman (2004) contends, 'Effective action anthropology demands insights into potential allies, enemies, coalitions, key metaphors, and ideologies' (p 491). Fine-grained studies can help to reveal how the bureaucracy is 'a life-world populated by actual buildings, specific objects and people with anxieties and dreams' (Hoag and Hull, 2017). If broad-brush approaches have led us to prematurely rejecting the state as site of political struggle, perhaps fine-grained studies of the state can foster a nuanced approach understanding how the state and its interests are constituted in practice.

This brief review identifies three sets of perspectives on the environmental state that can guide the analysis moving forward. First, the environmental state can be characterised spatially and historically by its administrative responsibilities and internal capacities. Second, through documenting a range of MfE's activities in relation to water policy, we can ask: are these activities ideologically coherent, and (how) do these accord with global tendencies in neoliberal restructuring of environmental states? Third, in addition to broad-brush political economic explanations, are there more-than-neoliberal logics that underpin state activities, such as organizational and individual values?

3.3 Methods

This chapter draws primarily from interviews, participant observation, field notes, and document analysis collected between February 2016 and March 2017 within New Zealand's Ministry for the Environment (see Chapter 1). Over the forty working days I spent within MfE, I conducted 40 semi-structured interviews with 28 unique individuals, ranging from

analysts and senior analysts through to team managers, the Directors of the Water Directorate and past and present members of the executive leadership team (including the current chief executive). Interviews ranged from 16 to 80 minutes, with most around 50 minutes. In this chapter I use the term ‘officials’ to refer to any bureaucrat working at MfE. I use the term ‘manager’ to refer to team managers, directors, and executive leadership, and the term ‘analyst’ to refer to analysts and senior analysts. This distinction allows me to highlight differences between managers and analysts’ perspectives, while maintaining a level of anonymity for individual managers by classifying them together.

3.4 Ministry for the Environment: mandate, characteristics, and reputation

New Zealand has a relatively independent state bureaucracy. Administrative heads of government departments are appointed by the State Services Commissioner rather than the government of the day, and public officials’ principal duty is to the New Zealand public rather than the government in office (Shaw and Eichbaum, 2018). Under the State Services Act 1988 and the Public Finance Act 1989, Ministers and chief executives agree on budgets and deliverables for their Ministries, but the administration and operation of the Ministry lies with the chief executive. The Ministry for the Environment (henceforth MfE) was created through the Environment Act 1986 to ‘advise the Minister on all aspects of environmental administration’ (Section 31a). While the Environment Act does not specify regulatory functions for MfE, under the Resource Management Act 1991 the Environment Minister has regulatory powers which MfE can be requested to discharge, such as reviewing regional council implementation of the RMA or writing national policy statements and national environmental standards. Under the Environment Reporting Act 2015 the Secretary for the Environment (chief executive of MfE) is co-responsible for publishing national State of the Environment reports. Importantly, since MfE’s budget must be negotiated with the Minister and signed off by cabinet, the size and scope of MfE’s activities are significantly affected by the priorities of cabinet and the ability of the Minister to secure funding for MfE’s work.

With 329 full-time equivalent employees in 2016, MfE is a medium-sized government department, with more capacity than small Ministries such as transport (123 employees) or defence (93) but considerably less than Ministries such as health (1095), education (2607) or primary industries (2413, see State Services Commission, 2016: 33). MfE has the second youngest average staff age of all government departments (39.6 in 2016) with strong female representation in the workforce (60.5%) typical of many government departments. It also has the third-lowest length of tenure (3.8 years) and the third-highest rate of annual turnover (24% in 2016, see State Services Commission, 2016). In broad terms MfE can be described as a relatively young, female, and pākehā (of European descent) Ministry.

Prior to the mid-2000s, MfE was largely considered an irrelevant entity in freshwater management, for reasons discussed in Chapter 2. Apart from publishing State of the Environment reports in 1996 and 2007, and producing technical guides and occasional policy discussion documents, MfE's activities were not considered significant by practitioners within and outside of government. One practice that was recalled favourably was that, in the 1990s, MfE used to submit comments on regional plans as a way of contributing a national environmental interest perspective into local planning processes (interviews, Consultant 3a, 2016; K. Hackwell, 2017), but this stopped by the early 2000s. When water reform was prioritized by the cabinet of the fifth National government, reform involved a re-envisioning and resourcing of MfE to proactively provide policy support for the National Policy Statement for Freshwater management (NPSFM) 2011 and 2014 and to help accelerate implementation. In 2012 the Water Directorate was created within MfE to drive a whole-of-government approach to water policy reform. The Water Directorate involved a merger between freshwater teams of MfE and the (much larger) Ministry for Primary Industries, as well as secondments from Treasury (MfE manager 3a, 2016).

Through the increasing frequency of freshwater policy developments since 2009, MfE has become a significant actor and power broker in freshwater policy, and through this it has had

to confront two sets of challenges. The first is practical: MfE has been missing in action for decades on freshwater, and is having to build its relationships and reputation effectively from scratch. This task, as we will see, is partly affected by the youth, gender, expertise, and high turnover of MfE staff. The second challenge is public and political; in leading these freshwater policy processes – including providing the secretariat for the Land and Water Forum and modeling for Nick’s Smith’s swimmability targets (see Chapter 2) – MfE is seen also as responsible for the political outcomes of these processes. Although government Ministries are supposed to provide ‘free and frank advice’ to their Minister (see Shaw, 2015), MfE is increasingly perceived as a political actor in ideological allegiance with the Minister (interview, K. Hackwell, 2017). The value-laden choices, inclusions, and exclusions that MfE makes through these policy making processes are of significant consequence and deserve critical analysis.

3.5 Into the breach: the brave new world of policy implementation

A first type of bureaucratic discretion is that of individual bureaucrats over specific budgeted projects. Here I describe the work of the Implementation team within MfE, which has been specifically charged with supporting regional councils to implement the NPSFM. By examining three sets of projects – relationship management, economic capability-building, and the NPSFM Review – we can see how bureaucrats have exercised discretion over the structure and substance of state projects in ways that do not simply align with a coherent rollout of the government’s neoliberal ideology. Crucially, while there are distinctively neoliberal elements within these projects, there are also other significant logics at play, and bureaucrats are creative in working within the constraints of their mandates.

In 2013 a group of officials were tasked with documenting and supporting the implementation of the 2011 NPSFM. Initially the team’s work involved surveying councils about their implementation progress and intentions, compiling information into a database that might eventually be mapped spatially (MfE official 3a, 2016). In 2014 a permanent

manager was hired for the team, who upon arrival initiated a significant redirection of the team's approach and focus. A team member recalls:

The work that had been outlined by the team was to pick some councils that were in the forefront (of implementation) and concentrate on developing their skills and learning from them. [the new manager] came from a council that wasn't on that list and [the manager] suggested even at the interview for the job that that was not an appropriate way to take the councils of New Zealand with us. Because it was either picking winners - and what do you do about the rest? - or it was funding the haves, and what was the position for the have-nots? (MfE official 3b, 2016)

This official emphasises an egalitarian approach to implementation that helps the 'have-nots' and not only those councils that conform with visions of implementation success. The approach developed instead involves a 'relationship management model', which was laid out in project documents and was well-understood by all in the team (Internal MfE documents, 2015, 2016; MfE manager 3b, 2016). Two team members were assigned to each regional council as 'relationship managers'. Their relationships involve regular (at least twice-yearly) visits to each regional council, as well as regular contact via telephone calls, emails and interactions through involvement in MfE-supported workshops. In the initial phase of this work, the team undertook training in basic qualitative research (communications, marketing, how to ask open-ended questions) and asked councils 'where are they going, what do they need, what are the stumbling blocks, what's their plans' (MfE official 3b, 2016).

Guided by a mandate to support councils and empowered by relative administrative discretion, the Implementation team pursued several projects under their mandate (MfE official 3b, 2016; MfE official 2c, 2016). The team organized 'exchanges' with regional council staff addressing the topics of collaboration, economics, and other technical issues in freshwater planning, to facilitate sharing of experiences (Internal MfE document, 2015). When I first arrived in February 2016, the team was eight people. By the time I left five weeks

later, one had been seconded to another department, and two new hires had joined. As of September 2018, only three of the original team members still work within MfE. This flux is not unusual, and it illustrates the wider problem of staff turnover in the Ministry (22.7% in 2017, MfE, 2017b: 35).

3.5.1 Relationship management – a new modus operandi for government?

We are trying to change the way the Ministry works with councils, and that will make a difference. (MfE official 3e, 2016)

The relationship management approach provides a sense of identity for the Implementation team. MfE officials imagine their purpose as thoroughly bottom-up, wherein MfE supports the reflexive diagnosis of issues by councils themselves, and provides strategic brokering and knowledge-based resourcing. One team member notes: ‘We’re not into recommending a particular model or path, or expecting them necessarily to come together on one’ (MfE official 3b, 2016). Rather, ‘What we’re trying to do is to put in front of them some ways of doing it – economics, accounting whatever it is, collaborative planning – and get them to share what works and what doesn’t for each other so that they can then pick up... what they think will be best for their region’ (MfE official 3b, 2016). In addition to the regional councils, relationship management portfolios were created for national-scale sectors of primary industry, environmental organizations, and iwi. Because of the high stakes involved in building these relationships, the ‘primary’ relationship managers were all initially senior analysts, to provide stability (seniors stay longer at MfE) as well as increase the perceived authority of the MfE officials in their interactions with councils.

Team members readily offer benefits of the approach. An initial benefit was the engagement of councils that had historically shunned MfE’s influence (MfE official 3b, 2016). According to one team member, ‘two... councils who have rather operated at arm’s length [from MfE]... are starting to see that there’s value in participation’ (MfE official 3b, 2016). Even though the

councils do not necessarily trust MfE, officials hope that by engaging in dialogue with other regions that this may lead to sharing and circulation of experiences, ideas, and perhaps, practices. For some, relationship integrity became a matter of personal pride, leading to strong ownership of relationships by individual officials and even protective behaviours (MfE official 3f, 2016). Further, the relative discretion afforded to the team meant that they would ‘almost 100% be able to turn around and be able to supply something that we’ve thought up that will meet [councils’] needs’ (MfE official 3d, 2016). As summarised by one official,

The networking’s been brilliant... I thought we might be coming to our natural end because we’ve covered a lot of ground. And so I asked them [council staff] and they unanimously said... that they wanted to continue having them twice a year for two days and here are some ideas of things they wanted to hear about. So they are still getting value. (MfE official 3d, 2016)

Relationship management has not been without its challenges, tensions and contradictions. For one, sometime projects fail. One team member was building a web-based platform for document-sharing amongst regional council staff (MfE official 3a, 2016), but when I checked in with this project later, it had dissolved because the web-based security requirements were too much of a logistical hassle for council staff to use easily. Another challenge is that even though councils may participate in exchanges to learn about MfE’s future policy directions, MfE officials have to guard such information very carefully, which places at least some constraint on their relationship-building (MfE official 3b, 2016). Perhaps most significantly, the Ministry-wide problem of staff turnover poses an acute challenge for the Implementation team, as they are the ‘outward facing team’ (MfE official 3g, 2016) of the Ministry on water issues. The team confront a legacy of recent negative MfE stakeholder perception surveys that all recommend greater continuity of contact persons at MfE (Internal project document, 2016). These challenges endure. For example, upon the transfer of emails from a previous colleague, one official recounts overlooking a single sentence at the bottom of an email, which

ended up having negative consequences for their relationship with that council (MfE official 3h, 2016).

3.5.2 Building economic capability

Section 32 of the Resource Management Act 1991 (RMA) was amended in 2013 to change how regional councils make and justify planning decisions. Where councils previously had to account for the benefits and costs of any plan change in generic terms, the 2013 amendments specified that costs and benefits must refer to the explicitly economic, environmental, cultural, and social effects of any proposed provisions. Further, any effects upon economic growth and employment opportunities must now be assessed and feature in decision making. Third, costs and benefits are now required to be quantified, where practicable (MfE, 2013b). When I joined the Implementation team in 2016, I was surprised to learn that a significant component of their work involved building economic capability with regional councils to support the new Section 32 regime (see Table 8).

Table 8. A snapshot of key projects in the economics capability-building workstream.

Project	Key features
Economics exchange 2014-ongoing (as of 2016)	<ul style="list-style-type: none"> • Twice-yearly workshops with regional council staff • Topics solicited from councils, e.g. S32 analysis, costing scenarios, ecosystem services, iwi values, infrastructure planning, limit-setting
'Scalable' economic assessments (2014-2017)	<ul style="list-style-type: none"> • \$2M of funding over four years for council-led projects 'that in some way built their organization's capability to do economic analysis... filling a local gap in knowledge and a national gap in knowledge' (MfE official 3a, 2016). • Included a modeling study of sediment in the Kaipara Harbour north of Auckland, and the uptake of farm management plans in the Horizons region. • Officials manage contracts, seeking updates from councils, and facilitating the feeding back of results and learnings to other regional councils at the end of the projects (MfE official 3a, 2016).

Economics 101 workshop (2016)	<ul style="list-style-type: none"> • One-day training course for council staff • Held in regions to increase participation • Course content produced by MfE officials, but ‘taught’ by an academic economist on secondment from a university • Plan to run course ~10 times by end of 2016
A national economics ‘tool’ (2016-17)	<ul style="list-style-type: none"> • Idea successfully pitched as utilizing the ethos of ‘co-design’ promoted by the new MfE executive leadership team • Output is radically open – could be tool, framework, guidelines • Plan to i) Use open-ended ‘empathy interviews’ to learn council staff needs, ii) Iterate tool between MfE-councils, and iii) Fine-tune output through two-day workshop in Wellington

The economics exchanges and the Economics 101 workshop can be read as elaborations of the team’s general approach to issue diagnosis and collective dialogue. For the Economics 101 course, officials report that ‘the thing that other people find really valuable is actually just being able to have that discussion about their skepticism with economics on the day... and have a bit of a dialogue about it’ (MfE official 3i, 2016). Officials adopted a bottom-up sense-making strategy oriented toward developing critical and practical competence rather than ideological alignment. They sought pragmatic examples in which economic reasoning might make environmental sense: ‘We’ve looked at farm-level analysis, upscaling that to a catchment... They’ve looked at mitigation cost curves so they wouldn’t be so scared of them anymore. And you know they go like *this* (demonstrates curve) and so we can get *this* much [pollution] mitigation... You know, don’t be scared of a graph because you’re not a mathematician’ (MfE official 3d, 2016).

The economic assessment funding and the economics ‘tool’ projects were similarly built out of the economics exchange, and strengthened the team’s relationships with council staff. In the case of the economics tool, officials pitched the idea of trialling the concept of ‘co-design’ which the then-new (in March 2016) executive leadership of MfE were advocating across the organization. Here, officials constructed a mandate for a radically open type of output. ‘I have no idea what this tool’s going to look like’, noted one official, ‘we will do whatever [the council staff] want. It’s not even going to be called a tool, we need to decide what we are

going to call it. But a tool does sound like “is it going to be a framework, is it going to be a box, is it... going to be a spreadsheet?” So we will find a way of framing the question, the real question we want answered. How can we help you... what can we develop that would be of use?’ (MfE official 3d, 2016). While the ‘tool’ project could be open and inclusive of all councils, the economic assessment funding could only be disbursed to councils willing and able to put together a successful proposal. As an official clarified in 2017, ‘the regions that we are working with are the regions who have said “yes pick us, pick us, we want to work with you guys”’ and most of them are quite well-resourced councils’ (MfE official 3c, 2017). Thus, despite the egalitarian intentions of the Implementation team, in practice there are organizational imperatives to fund those projects that already have the very capability that the state seeks to cultivate (see Mosse 2005).

Across these projects, an unspoken concept of capability has been internalised by the Implementation team. Consider that regional councils have variable scientific and social scientific capacity in their organizations, as noted by MfE’s (2017e: 47-48) own review of NPSFM implementation. When I asked around the regions, one council official explained that what they really wanted from MfE was either i) a list of experts who could be contracted to undertake economic analysis, or better yet ii) an MfE-funded hub of consultants to do economic analysis for regional councils (interview, regional council official 3a, 2016). While the economics workstream projects may help planners and others to understand the role and utility of economic analysis, these projects do not increase the material resourcing for councils to employ economists or modelers. An Implementation team member explained that

You’re not allowed to fund what is basically council business as usual, right. Councils should have a certain level of professional development that they do for their staff... Having two or three economists in-house who then went out to councils would basically mean we'd be giving councils staff, and we wouldn't have enough to help all the councils that need it. (MfE official 3e, 2016)

While the Implementation team have exercised agency and creativity in the substance and structure of their economic capability projects, these improvisations have been undertaken within a context that renders certain types of support as off-limits. This is an issue that we will encounter further below and throughout this thesis.

3.5.3 Juggling relationships and ethics with the NPS Review

The 2011 NPSFM signalled that ‘The Minister for the Environment intends to seek an independent review of the implementation and effectiveness of this national policy statement in achieving all its objectives and policies and in achieving the purpose of the Act’ (New Zealand Government 2011: 5). In early 2016 the Implementation team were assigned the task of designing and undertaking this review (henceforth the Review). Being asked to evaluate regional councils – with whom officials had now spent years trying to build trust – caused a fair bit of angst and uncertainty. The NPSFM was the centrepiece policy of the government’s freshwater reform, and to send any indication to the public that the policy had failed or was ill-conceived would not be a wise move for officials (who might be negatively evaluated by their managers) or for the Ministry (who might be negatively evaluated by its funder, the Minister). In the public sphere, MfE was trying to build name recognition as an independent environmental steward, however, so to align too closely with the perspectives of either regional councils or to the Minister could compromise their public reputation.

Based on the advice of a working group of senior regional council staff, the Review team decided to focus ‘more [on] the processes the councils are using than... if they are meeting the government’s outcomes’ (MfE official 3a, 2016). In this way, the Review could describe and compare council practices without providing a final evaluation of them against some normative criteria. ‘We are not going to pass or fail them, they just need to have something in place... there has to be a sign or some record of meaningful engagement of how you got the community's views. I’m prepared to be pragmatic, they just need to defend it’ (MfE official 3j, 2016). The decision to not issue a pass/fail verdict was also based on the limited view of

regions that the government could have from a distance. ‘We can’t or we shouldn’t sit here in Wellington and go “from what I’ve seen in my three visits and the odd person I’ve chatted to [that] you’re not doing a good enough job,” you know. We don’t have that level of information’ (MfE official 3j, 2016).

The team’s approach, then, involved documenting the formal planning procedures that have been undertaken in relation to the NPSFM – such as plan changes, collaborative processes, setting limits (see MfE, 2017e). Team members acknowledged that this narrower scope posed its own problems, but stuck to their decision:

If a council’s coming out with whole regime of managing water that’s not going to work for some technical reason or whatever (laughs)... Yeah you’re right, it’s not designed to find out that sort of stuff because I don’t think we can in the time that we have, or even that we are the right people. (MfE official 3k, 2016)

The Review involved a standardised written questionnaire sent to every council, and a two-day site visit in which the Review team met with local politicians, council staff, iwi, and local stakeholders. The participation numbers demonstrate council capacity differences: for the West Coast, two council staff attended, while for Hawkes Bay there were ‘probably 12’ (MfE official 3k, 2016). Council staff attendance was procured through councils, while for iwi and stakeholders MfE had to rely on their own relationships and suggestions of councils, which the Review team acknowledged was a significant limitation (see MfE, 2017e). The Review teams made a special effort to connect with iwi through the Mana Taiao unit of MfE and other networks rather than through council suggestions, because they did not want councils to ‘cherry-pick’ those representatives for whom they have positive relationships to report on (MfE official 3k, 2016). The Review teams also met with national-level industry and environmental groups, again relying upon existing management networks.

The Review team asked participants about the character and quality of council engagement strategies, limit-setting processes, relationships with iwi, and other topics. Notes taken were circulated condensed into legible bullet-point format and circulated to all involved for fact checking and clarification. The Review team then went through an internal sense-making process to identify and select the 11 themes that feature in the published Review (MfE, 2017e).

The Review process threw up several challenges for MfE officials involved. The issue of network saturation was evident. When officials approached council staff and stakeholders, some were frustrated about the time commitment involved, and one complained that they had already contributed to a freshwater policy survey conducted by a scientist at the National Institute for Water and Atmospheric Research. Further, 'at the same time we have the NPS amendments going on, so... they are all telling us the NPS keeps changing, they're sick of it, and they want to be left alone to get on with it' (MfE official 3k, 2016). Some councils were defending their plan changes in Environment Court at the time, and were concerned that acknowledging any non-ideal aspects of their planning process could be used against them in court arguments.

MfE officials also had to go through a careful process of sifting through the accounts they were presented and deciding how to represent them. As one official recalled,

People don't often sit around and tell you all of the good things that are happening. It's the same as when someone comes back from a holiday, you know. They don't tell you about all of the good times they had, they'll focus on... that they got mugged or they had to pay a bribe here, or... their plane got delayed here because... that's kind of interesting to people. I think we get a bit of that. (MfE official 3k, 2016)

When the draft report was circulated, some stakeholders and council staff contested claims made by others and demanded proof. For example:

Someone from an NGO might say “I don’t care what the council says, this waterway is stuffed, and the cause of it is farming.” So we can say, “according to stakeholders this waterway is stuffed and it was caused by animals” and the council will write back to us and say “bullshit, where’s the evidence?” or “that doesn’t match up with our monitoring”. (MfE official 3l, 2017)

In one case, a council called the MfE Review ‘a debacle’, as the Review team had only interviewed a single environmental and iwi representative, both of whom gave unflattering accounts of the council (MfE official 3l, 2017). The published Review (MfE, 2017e) contains several caveats in response to these concerns, such as emphasising the incomplete coverage of stakeholders, and arguing that stakeholders’ views are valuable even without external validation. The Review team chose to defend against these concerns rather than retreat to producing a more conservative document, and the final report includes some strong evaluative statements (albeit not directed at councils by name).

The Review team pitched the report as ‘being critical of ourselves’ as much as – if not more than – being critical of regional councils (MfE official 3l, 2017). The quietness of the report’s publication and reception is telling. For such a significant piece of work and an important progress marker for the government’s freshwater reform program, I was surprised to see it receive no Ministerial press release or any news coverage. After asking around MfE, I learned that ‘higher ups’ within MfE were unhappy with the report and sought to prevent – or at least downplay – its release. The report got through relatively intact, I understand, through the virtue of its rigorous process and officials who were prepared to defend it.

The purpose, conduct, and content of the Review were actively shaped by bureaucrats and not simply a mechanical translation of the Minister’s political ideology. The Review experience shows how MfE officials have navigated their competing roles, trying to avoid any clean ideological or normative allegiance to either the Minister or regional councils. The Review produced multiple challenges for officials to overcome, and they did so in ways which, while

logical, were not the only legitimate choices available. Officials improvised within the constraints of their situation to create a distance (if not independence) from the Minister, they invited councils into setting the agenda of the Review, and made significant efforts to solicit Māori perspectives beyond their councils' influence. They also enacted a concept of professional integrity that put them at odds with some councils and stakeholders, even though the Minister and 'higher ups' within MfE might have preferred a document with fewer criticisms of regional councils and central government. By examining the moments and contexts of discretion that bureaucrats encountered through the conduct of the Review, we can see how bureaucrats can engage in intentional forms of struggle to construct the structure and substance of a state project such as the Review.

3.6 The Water Directorate as the 'war room' of regulatory reform

The projects of the Implementation team are undertaken within the larger unit of the Water Directorate, which has a distinct founding rationale, coordinating objectives, and division of labour. In this section I sketch the work of different teams across the Water Directorate to consider what this whole-of-government approach to water reform looks like, whether it amounts to a coherent ideological program, and how bureaucratic discretion both constitutes and directs this work.

The Water Directorate (henceforth the Directorate) is a ~45-person unit (as of November 2017) within MfE. The Directorate was set up in October 2012 to help give effect to the recommendations of the Land and Water Forum's second and third reports (LAWF, 2012a, 2012b). MfE reallocated personnel to translate the LAWF's recommendations into specific policy proposals spanning various legislative, regulatory and non-regulatory actions (MfE official 3b, manager 3a, 2016). The Directorate brought together officials from MfE, the Ministry of Primary Industries (MPI), the Ministry of Business, Innovation and Employment, the Department of Conservation, and Treasury (MfE manager 3c, 2016). At the core of this collaboration was MfE and MPI, a collaboration which the government felt was crucial to

integrating economic production concerns within any resulting freshwater regulation (MfE managers 3a, 3b, 3c, 2016). The Directorate was allocated significant budget, as ‘Ministers... went “oh shit, we need to provide a lot more resource around this”’ (MfE manager 3c, 2016). From 2012 to 2016, the Directorate doubled its original staff of 25 and quadrupled its original budget of \$4M through successful budget bids supported by the Minister (MfE manager 3b, 2016).

One manager described the early years of the Directorate as being ‘the war room on water’, where high stakes policy was being developed, especially the National Objectives Framework (MfE manager 3a, 2016). The Directorate translated many of the LAWF recommendations into discrete policy levers (see MfE, 2013a). For example, the introduction of a community planning model would be included as an option in amendments to the RMA, and stock fencing would require a new regulation separate from the NPSFM. To generate national bottom lines for freshwater quality, the Directorate convened a group of over 50 scientists to build the National Objectives Framework, and in 2014 the government gazetted the revised NPSFM which included the Framework. Since 2014 the Directorate’s focus has shifted from policy development towards implementation support (MfE manager 3c, 2016).

3.6.1 Realizing freshwater reform: organizing logics of the Directorate

When I joined the Directorate in February 2016, it consisted of eight teams. Table 9 presents a stylised summary of each team with indicative projects for some teams. Officials from policy and implementation both described the work of the Directorate in relation to four broad orientations to the NPSFM (MfE officials 3j, 3m, 2016):

- implementing the existing NPSFM (guidance, implementation)
- testing whether the NPSFM is working (evidence-reporting)
- amending the NPSFM in response to specific issues raised (NPS amendments, evidence-policy)

- forward-thinking policy development outside the current NPSFM (policy-strategy, rights and interests)

Table 9. Water Directorate team descriptions and some Illustrative projects, as of February 2016.

Team name	Description
Water policy and strategy (henceforth policy-strategy)	Developing options for allocation and economic efficiency <ul style="list-style-type: none"> • Waiting for LAWF to provide recommendations • Options for addressing over-allocated catchments • Options for transfer/trade of water consents • International review of allocation systems, supported with council case studies • Synthesising submissions from public consultation
Rights and interests	Options for resolving iwi rights and interests in freshwater <ul style="list-style-type: none"> • Working on RMA amendments specifying requirements for participation of Māori in resource management • Working on NPS amendments specifying requirements to include tangata whenua values in freshwater planning
NPS amendments	Developing proposals for NPS revisions based on public submissions and feedback <ul style="list-style-type: none"> • Clarifying “overall water quality across a region” • Clarifying “limits”
Evidence-policy	Synthesizing science to inform amendments to the National Objectives Framework and economics to inform limit setting <ul style="list-style-type: none"> • Considering information about the Macroinvertebrate Community Index as a metric to incorporate into the NOF • Considering adding new nitrogen and phosphorous attributes to the NOF
Evidence-reporting	State of environment reporting and public communication of scientific information <ul style="list-style-type: none"> • Working with Land Air Water Aotearoa (LAWA) as web-based tool to communicate scientific information to the public
Program management	Internally-focussed team charged with coordination of work across the Directorate
Guidance	Develop and publish guidance for interpreting and implementing the NPSFM <ul style="list-style-type: none"> • Guidance documents on collaboration, Section 32 analysis

	<ul style="list-style-type: none"> • Running a “limits exchange”
Implementation	Build capacity and maintain strong relationships with stakeholders <ul style="list-style-type: none"> • Relationship management • Economic capacity building • NPS implementation review

This conceptual division of labour provides a coherent sense of purpose for the officials in the Directorate. Across these eight teams, officials experienced different feelings of constraint and agency. For the policy-strategy team, the issue of water allocation (developing methods to allocate water quantity or quality to users) was politically sensitive, and officials were required to ensure that they did not send any public signals about their direction of thought, or even the potential range of thought on the topic (MfE official 3m, 2016). The iwi rights and interests team were constrained in a different-but-related way, as the government’s position that ‘no one owns water’ meant that Māori would not be allocated the right to any (proportional or absolute) quantum of water (see Ruru 2013). The team’s function was to determine what Māori rights and interests in water might be in a legal sense, *without* giving Māori proprietary rights to water. As an official from another team reflected, ‘it seemed a bit peculiar to have the whole allocation debate... sitting within that rights and interests team, [who] were then given very little latitude to actually give anything’ (MfE official 3g, 2016). In contrast, the implementation and guidance teams felt they had significant discretion set their own agenda and frame their own projects, drawing on input from stakeholders (MfE official 3b, manager 2b, 2016). Where a bureaucrat sits within the Directorate affects their ability to frame and undertake projects, and the discretionary capacity of the implementation and guidance teams needs to be placed into context. First, there was a sense – expressed by officials – that the implementation and guidance work was non-political, as it was ‘about the stuff that’s already changed from a central government point of view’ (MfE official 3m, 2016). Second, perhaps owing to the relative novelty of the implementation program within MfE,

officials had considerable discretion to formulate their own agenda and projects (MfE officials 3b, 3d, 2016).

3.6.2 Styles and forums of bureaucratic agency

Conceptualizing the qualities and arenas of bureaucratic agency (i.e. discretion) across the work of the Directorate can be undertaken through three lenses. Since Section 3.5 examined the agency of implementation officials in designing and undertaking projects, here I consider the agency exercised by a more constrained team (rights and interests), as well as the Directorate more broadly in relation to freshwater reform agenda and its role in reshaping policy and project development.

3.6.2.1 Decolonising around set policy parameters

On issues for which the government of the day has clear policies or stated preferences, explicit constraints on officials are arguably the strongest. These constraints come in the form of heightened secrecy about the nature of ideas being considered and the type of work being undertaken, and internalised censorship regarding certain types of consultative activities. Even within sensitive issues, however, creativity and improvisation are still required to forward policy work in these areas, and bureaucrats' work is far from some machine-like translation of pre-formed ideological interests of politicians.

Consider the work of the rights and interests team. The allocation and economic use of freshwater is directly relevant to guarantees in the Treaty of Waitangi that Māori would retain sovereignty over – and possession of – their lands and taonga (or treasures, see Chapter 2). As a part of the freshwater reform undertaken by the fifth National government, the freshwater rights and interests of Māori were designated as a key work area (MfE, 2013a). Within the Directorate, a 'rights and interests' team was set up, and a new governance collective was initiated to deliberate with MfE. The Iwi Leaders Group consisted of eight representatives selected from the Iwi Chairs Forum, itself a nation-wide collective of

iwi leaders. The Iwi Leaders Group had a special mandate to interface with the Crown on freshwater policy, and were supported by an advisory team of experts and officials, including the rights and interests team. One official notes that while this engagement was not formal, it was very useful:

That engagement doesn't replace consultation and engagement nationally with other iwi and hapū, but it sort of happens in a safe space. So it's a good faith engagement, it's free and frank discussions, information gets shared on a confidential basis and that has helped us to test ideas, share ideas and develop proposals that hopefully better meet iwi expectations. (MfE official 3n, 2016)

Key achievements from these interactions include: acknowledging Te Mana o Te Wai (the spirit of the water) within in the 2011 NPSFM, explicitly identifying Māori values such as mahinga kai (traditional food gathering) in the in the 2014 NPSFM, strengthening the Te Mana o te Wai provisions in the 2017 NPSFM, and strengthening expectations for regional councils to engage with iwi in freshwater planning, as included in the 2017 RMA reforms. These achievements were both supported and driven by officials who took notes from over 100 regional hui (meetings) and read, analysed, and summarised feedback from Māori and the wider community about the Next Steps for Freshwater consultation document (MfE, 2016b). In addition, officials worked with the Iwi Leaders Group to articulate recommendations and policy language for a revised NPSFM and a revised RMA (MfE official 3n, 2016).

Dialogues between the Iwi Leaders Group and the Crown have been often referred to prominently in MfE policy documents to enhance the perceived legitimacy of government policy (e.g., MfE, 2013a: 8; 2016b: 27). However, policies resulting from these conversations do not necessarily reflect the complete aspirations or consent of the Iwi Leaders Group (MfE official 30, 2016). Indeed, the Iwi Leaders Group has publicly criticized the government's decisions on numerous occasions, such as the government's addition of language around

economic values in the 2017 NPSFM amendments (e.g. see Neilson, 2017). MfE officials are also quick to challenge the view that government policy fully reflects the Iwi Leaders Group's aspirations. When I asked if Iwi Leaders Group-Crown dialogue was an example of co-governance, I was immediately corrected:

My understanding of co-governance is that there is joint decision making, it's important to state that the Crown retains decision making for public policy, so this is not a situation of co-governance. What it *is* is a process of collaborating and sharing ideas and information to develop better policy. (MfE official 3n, 2016)

Given that the Iwi Leaders Group has been prominently cited by the fifth National government, this placed pressure on the government to incorporate as many of the Iwi Leaders Group's recommendations as possible. In the Next Steps for Freshwater document, MfE (2016b: 28) note that 'feedback from regional councils and the Freshwater Iwi Leaders Group... is that... [Te Mana o te Wai] is unclear and provides ambiguous and inadequate direction.' While the revised 2017 NPSFM included a new controversial Objective A4 emphasising the provision of economic well-being (New Zealand Government 2017: 12), the new description of Te Mana o te Wai in the same document clarified that 'it is intended that the health and well-being of freshwater bodies is at the forefront of all discussions and decisions about fresh water' (ibid: 7). Although it remains to be seen if this Te Mana o te Wai language will be influential in legal settings, the addition of both statements into the 2017 NPSFM is likely better for both Māori and the environment than the addition of the economic provisions alone.

In their efforts to support the creation, articulation, and uptake of recommendations from the Iwi Leaders Group, officials would not describe their work as opposed to the neoliberal environmental agenda of the fifth National government. As Mosse (2005) argues, bureaucratic power can be practised not only through changing the stated objectives of an organization, but also through changing how existing objectives are interpreted and

connected to objectives elsewhere in the system (see also Heyman 2004). MfE officials were instrumental in working with the Iwi Leaders Group to frame and prioritize their recommendations, and narrating these recommendations in ways that could be perceived as non-threatening to a neoliberal centre-right government. While certain freshwater policy outcomes for Māori have been significantly limited by the government's stated policy positions, officials and the Iwi Leaders Group have worked to secure significant gains in the policy process that would not have been achieved in the absence of their energy and commitment to decolonizing the state.

3.6.2.2 Strategic lesson-drawing from LAWF and Europe

In contrast to tightly constrained policy issues, the more open question of how to design a system of national environmental baselines created two new moments in the policy process: translating recommendations from the Land and Water Forum, and distilling lessons from overseas. Bureaucrats exercised agency by interpreting these 'sources' in different ways.

In 2010 the Land and Water Forum (LAWF) advocated for the development of a national regulatory regime built around bottom lines for freshwater quality. Since the LAWF recommendations are branded with the mark of consensus of over 50 major civil society organizations, the Directorate made significant efforts to work with LAWF, staffing the LAWF secretariat and sequencing MfE policy work around LAWF timelines and outputs. This was a consequential decision. For example, one MfE manager wanted to develop a limit-setting toolkit that councils and stakeholders had requested, but their proposal for funding was declined on the basis that it would 'interfere with what the LAWF are thinking about' (MfE manager 3d, 2016). A potential interpretation of this decision is that Directorate managers wanted to work with the political power of LAWF to advocate strengthening environmental limits, and needed to ensure LAWF members felt central to the policy process.

Upon reading LAWF's recommendations, however, MfE managers felt many of these recommendations were not 'policy-ready' (MfE manager 3a, 2016). This created space for officials to exercise discretion in adding further agenda items as well as criticizing specific consensus-produced LAWF recommendations. One official noted, for example, that while the LAWF recommendations covered many things, 'they couldn't really land on... the crunchiest, hardest stuff' such as allocation methods or what do about new water users (MfE official 3m, 2016). Another official argued that the LAWF's recommendation to force councils to report on the Macroinvertebrate Community Index (MCI) of rivers as a measure of ecological health was 'completely flawed' because it was 'never designed for that use' (MfE official 3p, 2016). In this way, officials have had to tread a careful line between recognizing LAWF's legitimacy versus augmenting LAWFs proposals based on technical merit. These discretionary moments of deciding what is 'policy-ready' and what is not can risk undermining the legitimacy of the LAWF process. For example, one member of LAWF recounted feelings of frustration with MfE's apparent resistance to LAWF's recommendation to include MCI:

I think the officials fuck it up - good technical term. It's mind boggling... I mean [named official] was busy arguing all the way that we couldn't do MCI, and everybody is just rolling their eyes and going "We've been doing this for 30 years, every regional council manages MCI. MCI is a major part of resource consents and stuff, we really know MCI." Despite every single scientist saying "no, it's fine", every regional council saying "no, it's fine", but [named official]... the Directorate sent out another view. (interview, K. Hackwell, 2017)

If the selective adoption and resistance of LAWF recommendations can be described a type of discretionary cherry-picking, a second type of cherry-picking can be identified in efforts to learn from Europe. In the early days of the Water Directorate, several Directorate officials undertook information-gathering trips abroad to learn about the European Water Framework Directive. Adopted in 2000, the Water Framework Directive requires all member nations to

achieve ‘good ecological status’ for all waterbodies by 2027, and provides an analogue for New Zealand’s experience with the NPSFM (http://ec.europa.eu/environment/water/water-framework/info/intro_en.htm). The OECD has recently compared New Zealand’s environmental bottom lines with those of the Water Framework Directive (WFD), finding that ‘New Zealand bottom lines are set below the equivalent WFD bottom line’ and that the NPSFM includes looser criteria for pleading exception to these bottom lines (OECD, 2017b: 170). The OECD suggested the NZ government might consider ‘setting the default water quality level high’ and having strict criteria for any downward negotiation from a high default (OECD, 2017b: 171). Against this, however, an MfE manager during the creation of the 2014 NPSFM recalls that European practitioners they spoke to ‘were pretty adamant about what not to do’ (MfE manager 3a, 2016). European practitioners warned against using European-style bottom-lines in policy because ‘if you have raw numbers that people have to meet, and they fail, and they’re always going to fail’ (MfE manager 3a, 2016). Having strong ecological bottom-lines in Europe rendered most implementing districts non-compliant, ‘which meant that actually the government was reluctant to do anything because it felt so hopeless’ (MfE manager 3a, 2016). When policymakers looked at a map of their countries with most of the colors were red (designating failure to meet bottom-lines), this became paralyzing politically. European officials also warned against allowing a regime of exceptions, because ‘in Europe everyone has got an exception’, and ‘an exception was a free pass, and we didn’t want a system that was based on free passes, we wanted a system that was based on planning to get better’ (MfE manager 3a, 2016).

Another MfE manager drew a different set of lessons from their embodied experience of the Water Framework Directive:

European directives... are very prescriptive. So the equivalent to FMUs (Freshwater Management Units) in the UK, at one point we had over 10,000 of them because of this European way of saying it’s all based on altitude, all these different things that

they'd set for the whole of Europe. And if you rigidly follow this mapping process we ended up with over 10,000 in the UK... But at least everybody was doing exactly the same thing and there was no room for challenge because the rules were set down. They may have been stupid but everybody followed them, whereas here there's so much more flexibility, it's a real, real difference and with that flexibility brings out opportunity for challenge of decisions. (MfE manager 3e, 2016)

A third lesson from the Water Framework Directive experience highlighted the importance of providing significant resourcing to support implementation: a third MfE manager agrees that 'internationally, governments have said it's no good dishing out new policy without supporting the people to implement it' (MfE official 3b, 2016). MfE officials used this lesson to support their proposal to budget and staff the Water Directorate as a new department within MfE.

The different lessons that three managers learned from their experiences of the Water Framework Directive suggests that there is not one single take-away point to be gleaned. While the first manager felt that the Water Framework Directive clearly indicated that setting high environmental baselines was precisely what *not* to do, the OECD – surprisingly – has criticized this view and urged New Zealand to strengthen its environmental baselines. Officials can and do draw multiple and perhaps even competing lessons from abroad, and these lessons can be used to justify existing policy approaches or encourage alterations to policies (e.g. Stone, 2017). In this process of lesson-drawing, officials exercise agency in selecting who to talk to, whose opinions (including their own staff) to listen to and value, and what criteria should be prioritized in proposing policy ideas to the Minister. While the Minister may conduct a final layer of explicitly ideological decision making, bureaucrats curate policy experience from elsewhere before the Minister is even faced with detailed policy proposals.

3.6.2.3 Rewiring decision making through selective civil society engagement

The work of the Water Directorate involves building selective connections with civil society stakeholders to forge coalitions of support for water policies and their implementation. Here, bureaucrats exercise discretion as they undertake consultations, solicit expert advice, workshop ideas, and present feedback to superiors and the Minister to shape policy agendas and refine the scope of political possibility. Through the work of their projects and their relationship-building, Directorate bureaucrats are weaving a network of thought and practice, as well as securing – and actively narrating – consent for particular policy ideas. They are reconfiguring the networks of patronage that underpin particular policy models (see Mosse 2005), and thus reconfiguring how consent and rule is achieved.

As with the Implementation team, other teams in the Water Directorate also engage regularly with councils, iwi, and stakeholders in formal and informal forums covering policy and non-policy projects. The guidance team, for example, exchanges with councils to develop and refine their project list, with each piece of guidance in turn being steered by a working group of self-nominated council staff (MfE official 3q, 2016). Similarly, an official from the amendments team ran workshops with hydroelectricity providers and councils to solicit their advice on how the NPSFM might be amended to allow for waterbodies with large infrastructure projects (such as dams) to be exempt from meeting the 2014 bottom lines (MfE official 3r, 2016). In the evidence-policy team, expert panels were used to solicit feedback on the proposed attributes for the National Objectives Framework, although the level of engagement was less demanding: ‘we don’t try and burden them too much, so they really just show up on the day, chuck in their two cents worth and then disappear again’ (MfE official 3r, 2016). And even the policy-strategy team, while there are constraints on information secrecy in some domains (such as allocation policy), in less-politicised and more exploratory areas such as urban water ‘we are free to go out and talk to people’ (MfE official 3s, 2017).

This rapid expansion of relationship-building with civil society across the Water Directorate is often informal and always selective. It is informal because these meetings are not publicly notified, and selective because MfE officials choose who to engage with. As one official reflected:

It's good for the people who are involved in it. For the people who perhaps aren't involved [they] may feel a wee bit excluded, so we do get asked every now and again who chooses who goes on the working group, who chooses who gets involved in the workshops. (MfE official 3q, 2016).

From the amendments team workshop with hydroelectricity providers, an official noted that 'there's a lot of small generators (i.e. electricity producers) and we haven't really partnered with them, so you're right in that it's selective' (MfE official 3r, 2016). The lack of clear protocols or accountability regimes for these relationships also opens them up to being played from both sides. It's one thing to work with councils, its another to work with advocacy groups and lobbyists.

They are often well-resourced and bolshy [pushy] as hell, so if you've got often quite young staff leading quite major bits of work... You may end up with environmental regulation that totally suits the industry (laughs). (MfE official 3t, 2016).

The process of writing the NPSFM Review in 2016 also raised new questions for the Implementation team. Through that process, officials became acutely aware of how *who* they talked to at councils and from iwi and community in the regions affected *what* accounts they received (see Section 3.5). In part based on the Review experience, in late 2016 the Implementation team decided to expand their relationship management approach beyond councils to include regular catch-ups with regional stakeholders and iwi outside of council (MfE officials 3h, 2016, 3u, 2017). Citing the Review process, implementation officials made the case to Directorate managers that regional iwi and stakeholders often had different

perspectives to councils, and these should be incorporated into MfE's regional relationship-building approach.

In addition to the team-based projects within the Directorate, the interactions between teams across the Water Directorate also affect what happens to stakeholder input and information. With different teams conducting separate engagement initiatives for different policy issues and with different objectives, there is a risk of collective stakeholder fatigue, especially if stakeholders engage with one part of the system (e.g. guidance steering groups) on the assumption that their input will be translated into other relevant parts of the system (e.g. NPS amendments or policy work). This problem is generally recognized by officials, and some provided positive examples of different teams working together on stakeholder engagement to across policy-implementation, evidence-guidance, and guidance-implementation (MfE officials 3g, 3m, 2016). Occasionally, however, barriers are erected between teams and parts of MfE. An official involved in running collaborative exchanges recalls:

Councils... were so keen to be involved in those collaborative exchanges was because they knew in the 2013 reform discussions... [that] there is going to be defined, explicit collaboration process outlined in the RMA, and they wanted to be involved in influencing that. But what they've got (in the 2017 RM Amendment Act) is something that is far removed from what they think could have worked. So now I'm sure they are putting in submissions and things but I'm sure they are also thinking "well what the hell was the point of that last two years talking to MfE about collaboration, if it didn't have any bearing on the policy?" I mean, it's the rubber hits the road stuff. It's the policy input... and it doesn't kind of make us look too good, because they (councils) must assume that we have no influence. (MfE official 3g, 2016)

Officials exercise discretion as gatekeepers to emerging forums for collaborative policy development. Officials select who to invite, they contribute to structuring the forums, they decide whose contributions will be translated into policy proposals, and how. Within this

context, officials care deeply about their personal and professional relationships with stakeholders, and work hard to try and realize meaningful policy changes based on these interactions. However, sometimes officials do not have the discretionary powers to institutionalize or action certain types of feedback, and the division of labour between ‘policy’ and ‘implementation’ can lead to slippages of stakeholder input and feelings of frustration.

The discretionary actions of officials can both reinforce and counter patterns of political-economic power in environmental decision making. On the one hand, officials tend to draw upon their existing contacts within Māori, industry, and environmental organizations, which privileges existing relationships and reliance on ‘the usual suspects’. On the other hand, officials are often cognisant of the exclusions and consequences of their selections, and some officials are taking some steps to remedy their perceived blind spots at both the project scale as well as the Directorate scale. As one example, one manager expressed excitement about a future project to formulate a strategy for engaging youth in environmental issues across New Zealand (MfE manager 3f, 2016). Thus, while Directorate are opening up some policy development activities to civil society, they are doing so *selectively*, and at least some are doing so reflexively with an eye toward using processes of selective engagement that privilege (rather than exclude) the voices and interests of actors who are traditionally marginalized in environmental decision making.

3.7 Securing discretion through the authorizing environment

At the level of the whole Ministry, discretion can be conceptualised through the notion of the authorizing environment. Two senior managers emphasised the importance of the ‘authorizing environment’ (see Moore, 1995), referring to the level of explicit consent needed for MfE to undertake activities (MfE managers 3h, 3i, 2016). A healthy authorizing environment refers to a trusting relationship in which MfE is authorized to undertake many activities without the explicit consent of the Minister, whereas an unhealthy authorizing environment would involve little authorized autonomy. Securing a workable authorizing

environment involves balancing the short-term political priorities of the Minister with the generation of momentum for longer term, larger scale outcomes relating to economic production systems, indicators of national wellbeing, and ecological sustainability (MfE manager 3h, 2016). Recall that MfE's budget relies on support of the Minister and that budgets are affected by the priorities of the government of the day. Over the next four years, these priorities are proposed to shift from freshwater to climate policy, marine policy, and resource management reform (MfE, 2017b).

MfE is administered by the Secretary for the Environment (or chief executive) Vicky Robertson. Robertson was appointed in 2015 by the State Services Commissioner, leaving behind a role as deputy chief executive of Treasury to replace outgoing MfE chief executive Paul Reynolds. When I arrived at MfE in February 2016, Robertson was 8 months into her term, and there was significant buzz in the air. Robertson appointed an all-female executive leadership team, which contrasted sharply with the previous mostly-male team⁵. Many officials were talking about undertaking 'co-design' and were excited about what it meant for their work (MfE official 3d, 2016), while some were skeptical of what they saw as a shallow management fashion imposed by administrators (MfE official 3v, 2016). For many who I spoke to, it felt like a clean sweep of personnel and philosophy, presenting a fresh start for the Ministry. As a part of this change, MfE's tagline was changed from 'Environmental stewardship for a prosperous New Zealand' to 'Making Aotearoa New Zealand the most livable place in the world'.

A fundamental challenge for the new executive leadership team (ELT) was to generate and maintain a healthy authorizing environment to enable the undertaking of projects and strategies to develop a robust identity for MfE as a public-serving (and not only government-serving) organization. Practically, this involves the use of prominent bridging concepts that

⁵ As of August 2018, the ELT consists of four females and one male.

the Minister can support ideologically and which also enable the work of MfE. While the ‘co-design’ concept was brought to MfE by the new ELT from Treasury, by August 2016 the new buzz was around ‘livability’, ‘partnering with purpose’, ‘policy-plus’, and in March 2017 it was ‘natural capital’. In MfE’s four-year plan 2017-2021, which received sign off from the Minister, these concepts formed the major pillars of MfE’s proposed work (see MfE, 2017b):

- Liveability – ‘puts our customers (all New Zealanders) at the heart of our work and recognises the critical role that our environment plays in all aspects of our lives.’ (p3). ‘Our purpose, as an organisation, is to make New Zealand the most liveable place in the world for our children, their children and their mokopuna [grandchildren]. That will come from having a deeper understanding of the how we depend on nature to thrive and continuing to strengthen our stewardship role.’ (p6)
- Partnership with purpose – ‘We will engage early in our policy with stakeholders to provide the best advice to Ministers... engagement will remain central to our work, allowing us to influence and inspire action among others.’ (p8)
- Policy plus – ‘we want to... develop policy... that looks beyond our regulatory tools to achieve effective system outcomes.’ (p18)
- Natural capital – ‘we will bring a natural capital lens to the natural resources sector of government’ (p8). ‘We use the concepts of natural capital and ecosystem services to understand how the actions we take will affect, or be affected by, the functioning of our natural environment.’ (p9)

It is worth reflecting on the polysemic nature of these concepts. Some officials saw *liveability* as emphasising the ‘connectedness’ of the environment with other policy areas (MfE manager 3f, 2016), and that ‘liveability gives you more scope perhaps than the umbrella of “prosperity”... to kind of talk about a whole bunch of different stuff that isn’t just economic wellbeing’ (MfE official 3i, 2016). Others, however, felt that this diluted the environmental stewardship mandate of MfE, and that liveability only values nature that is of use to humans.

Partnership with purpose largely continues and embeds the interactive policy practice seen in the Water Directorate across the whole of MfE, aligning very clearly with Minister Smith's own promotion of collaboration as a legitimate mode of policy making (see Chapter 2). This legitimates and resources the efforts of bureaucrats to make policy making more porous and inclusive. *Policy-plus* refers to non-regulatory modes of state interactions with civil society, which critics might interpret as a rolling back of the state from its responsibilities as a regulator (e.g. McCarthy and Prudham 2004), but which managers see as an opportunity to steer outcomes over and above that required by regulation (MfE managers 3g, 3h, 2016). The introduction of *natural capital* caused a fair bit of angst amongst analysts who, like many critical academics, associate natural capital accounting with economic valuation of ecosystems (e.g. see Dempsey, 2016). Some analysts interpreted the natural capital framework as something the new ELT brought with them from Treasury, and they were inherently skeptical of its economic philosophical underpinnings. When I asked a manager about the reasoning for the natural capital pillar, they explained:

a lot of the rest of the world is starting to think differently about how they measure economic growth, including how you think about natural resources, not as an Input but as a critical part of their economic drivers, so, like labour or capital. Natural capital is an investment project to say "is there some new thinking that... actually takes us to valuing natural resources as a critical input into economic prosperity, into social prosperity, into cultural prosperity?" So it's actually putting natural resources at the core [of conversations about prosperity]. (MfE manager 3i, 2016)

After I commented that quite a few officials seemed skeptical of the natural capital framework, they continued,

I'm not even convinced going down the accounting treatment route is the right one. It might be needed, I don't know. It might be that's the next progression and then we move to something else... But for me its creating an organization that is actually

thinking about how its thinking... and opening up. Because who's to say our current framework is the right one? (MfE manager 3i, 2016)

While terms such as liveability or natural capital may carry anthropocentric or neoliberal subtexts for some observers, these terms can also be intended to be interpreted in more open ways. With Treasury, MfE, and Statistics New Zealand all embracing elements of the natural capital framework, there is an emerging whole-of-government chorus to supplant Gross Domestic Product as the primary measure of national wellbeing (Bennett, 2018). Considering this, it is worth asking whether and how bureaucracies can build enduring, bi-partisan, whole-of-government shifts toward new modes of economic development.

Creating a healthy authorizing environment is crucial to enabling MfE to develop its own objectives that can span successive governments, as well as resourcing MfE to do so. To secure this authorizing environment, bureaucrats must carefully craft organizational narratives that align with – while also extending beyond – the ideology of the government in power. Just because the organizational strategies of MfE are composed under conditions of structural constraint, does not mean that MfE's strategies are determined by these structures. Creativity is involved – and indeed required – in branding organizational strategies that can both enable MfE to develop a robust public interest mandate as well as align with the short-term priorities of its Minister. Importantly, the formal and informal strategies, buzzwords and categories promoted by the ELT and managers are not empty signifiers. As we have seen with the Implementation team's work, officials can and do find ways of working these concepts into their current projects and proposals for future work. These concepts create new incentive structures throughout the bureaucracy, encouraging new projects to be conceived, proposed, selected and implemented, with all the frictions and rejections that occur along the way. While these new bridging concepts from the ELT will affect the nature and direction of freshwater policy work in a significant way, they will not completely *determine* the nature of

that work; officials still have agency to realize projects and recirculate alternative meanings back up the hierarchy.

3.8 Explaining state action: comparing broad-brush and fine-grained analyses

From these differently-scaled accounts of policy work at MfE, we can now ask: are MfE's freshwater policy activities organized around a coherent ideological agenda? Or, to put it slightly differently, is MfE intervening to structure the institutional void of policy implementation in a coherent way, and what are its motivations? To answer these questions, it is worth considering what a broad-brush analysis of MfE's activities might suggest, as well as what a more fine-grained analysis reveals about the coherence and intentions of MfE's policy work.

3.8.1 Neoliberalism of/and New Zealand's environmental state: a broad-brush analysis

We can now consider whether and in what ways MfE experiences 'neoliberal' tendencies, and we can query whether such tendencies are neoliberal by design and intent. In the domain of freshwater at least, MfE has evolved from only occasionally publishing guidelines and regulations in the 1990s, to becoming the primary 'war room' of environmental-economic regulation, spearheading multiple processes of engagement to advance government reform of freshwater and agro-economic policy. Over this period, MfE has shifted towards the hiring of generalist policy workers, and its walls have become significantly – albeit selectively – porous to civil society. Through these changes, three broad developments appear to align with the script of neoliberal environmental governance, although there are frictions in how they do so: decentralization without resourcing, the rise of non-regulatory modes of governance, and the prominence of economic discourses.

The decentralization of regulatory responsibility to regional councils parallels wider shifts toward de-nationalising environmental responsibilities (Cohen and McCarthy, 2015; Mol,

2016). Rather than asserting strong standards from central government and providing resourcing to achieve them to the regions, the experience of the NPSFM – with its revisions in 2014 to add new monitoring requirements, and in 2017 to add swimmability measurements and targets – constitutes a massive new workload for regional councils, who are expected to resource these tasks from their existing (unchanged) budgets. In addition, MfE has made new in-kind demands upon councils in the form of its expanded relationship management regime and its collaborative approach to policy development. Council staff are not only expected to implement the new provisions of the NPSFM, but they are also to be asked to contribute their own time and resources to MfE work. The proliferation of working groups and exchanges all require civil society representatives to leave their other work to engage with MfE, generally in the hopes of gaining insight into future regulatory changes, contributing feedback to affect regulatory changes, and to learn from others. Whereas one regional council staff had expressed a desire for MfE to provide direct financial or in-kind support (e.g. staffing) to implement the NPSFM in their regions, MfE's structure and logic of policy implementation support cannot 'fund what is basically council business-as-usual' (MfE official 3e, 2016). At the same time, however, the fifth National government made massive financial investments into MfE and the Water Directorate to provide various types of in-kind support. While the Implementation team sought initially to enact an egalitarian approach to supporting the 'have nots' instead of the 'haves', the economic capability project funding was ultimately allocated to councils who were willing and able to co-fund that economic work. Thus, while the Directorate – and MfE – have acquired some resourcing to support NPSFM implementation, these practices do not resolve the resourcing problem for regional councils, iwi, and civil society stakeholders. Rather, MfE's funding allocations can exacerbate existing resourcing differences by funding the well-resourced councils in an effort to demonstrate the utility of MfE advice and secure positive evaluations of project outcomes.

The rise of non-regulatory modes of state intervention are also evident within the work of the Directorate, and provide a touchstone to analysing neoliberal tendencies. In my short stay at

MfE, I attended a research presentation about how to encourage pro-environmental farmer behaviours, and a different seminar introduced concepts and applications of behavioural economics. Since I left, the Implementation team has been renamed as Implementation *and Behaviour Change*. From the various water policy workshop exchanges and the collaborative production of guidance material, through to the economics capability project and MfE's new emphasis on 'policy-plus', there is a visible reworking of MfE's organizational mission to extend beyond working on formal policy instruments. On the one hand, this can be linked to broader observations of shifts toward voluntary and non-regulatory modes of governing (Benson and Jordan, 2017; Perkins, 2017b). While some scholars interpret the rise of non-regulatory mechanisms simplistically as reflecting state privileging of economic interests (i.e. roll-back of state responsibility), in the New Zealand case the picture is more complicated. Unlike the U.S. Environmental Protection Agency, for instance, MfE has no independent regulatory or administrative power. MfE cannot write regulations unless it is asked to do so by the Minister. In this way, MfE's embrace of non-regulatory means can be read as a way of expanding its mandate to intervene in civil society – to engage with industry and other actors outside of the domain of regulation. In addition, probably half the work of the Directorate was still focussed on developing regulations, in the form of amending the NPSFM, undertaking reviews of policy issues, and advising on how to add or revise the national environmental bottom lines. MfE has been driving a whole program of regulatory and non-regulatory changes to New Zealand's resource management system. Non-regulatory mechanisms may pose less cost to industry and provide the appearance of 'doing something' despite having weak environmental bottom lines. This is one valid reading of the rise of non-regulatory approaches within MfE, but it is not the only valid reading of this situation.

The proliferation of economic metaphors, concepts, and languages can also be considered as evidence of a neoliberal script. The Implementation team's economic capability project, for example, was directed to support an explicitly ideological policy by the government to embed economic logics into regional decision making processes. Similarly, the inclusion and

centrality of ‘natural capital’ as a pillar of MfE’s work could also be cited as a creeping in of economic ideology into the Ministry. Several officials have identified and criticized this creep, and at least one considered this the product of the chief executive’s background from Treasury. Against this image of ideological creep, however, even amongst senior management the natural capital framework was intended only as a bridging concept, and many officials are openly skeptical of economic valuation frameworks such as those associated with ecosystem services and natural capital (fieldnotes, March 2016). This inherent skepticism was shared by regional council staff, who steered the economics exchanges and the Economics 101 course into becoming a space for venting concerns about economic methods and troubleshoot ideas for how to comply with the new RMA regulations. In both cases, the presence of economic language does not clearly prescribe the nature and consequences of the activities of MfE bureaucrats.

While MfE’s activities exhibit some alignments with neoliberal reconfigurations of environmental states, there are also non-alignments and even counter-currents. The creation of property rights and markets, so prominent in the in the U.S. (e.g. Heynen et al., 2007; Robertson, 2018), are notably absent as a driving force in MfE and New Zealand environmental politics. Instead, New Zealand’s freshwater policy regime is based on nationwide bottom lines for environmental protection. Although MfE officials will continue to develop policy mechanisms for water quality and quantity allocation, these are not being understood or framed by state actors as linked to absolute property rights to be governed through markets. If the lack of market discourses presents a non-alignment with the neoliberal script, MfE officials’ activities around co-design and Māori-Crown relations could even be interpreted as a counter-current to it. On the one hand, critical scholars have identified how ‘soft spaces’ of regional and environmental planning have been co-opted by economic elites to secure their interests, in a process facilitated by the state (e.g. Haughton et al., 2013; Brisbois and de Loë, 2016). On the other hand, there seems little evidence of this interpretation within MfE. To take the NPSFM Review as one example; here officials made

substantive efforts (beyond requirements) to speak to Māori and stakeholders in the regions, and the Review reported criticisms by councils of the government policy (i.e. the NPSFM). The Implementation team's relationship management approach has also now broadened to include regular catch-ups with regional Māori and stakeholders in addition to council staff. In these ways, as well as the wider co-design efforts of the Water Directorate, MfE is opening doors to the policy development process, and officials are doing so conscious of power imbalances. Further, MfE's explicit prioritization of Māori resource issues – in part through working with the Iwi Leaders Group – has led to several notable policy gains, despite working for a conservative government. While it may be possible to game these new soft spaces of co-design for economic actors, perhaps it is also possible to repurpose these spaces toward the affirmation articulation of indigenous rights. These shifts toward using soft spaces for a decolonising and democratising environmental policy in New Zealand deserve scrutiny and critique, and I do not contend that they are without their own contradictions. However, I argue that they do constitute coherent, more-than-neoliberal logics that underpin and shape state activities.

3.8.2 System goals and bureaucratic action: a fine-grained analysis

[T]he work of organisations is more immediately shaped by their own “system goals” – those of organisational maintenance and survival – than by the formal policy goals of the minister. (Mosse, 2005: 103)

Bureaucracies such as MfE are not machines that mechanically translate the ideological intent of their political masters. Rather, as Mosse points out above, bureaucracies have their own system goals, and these operate at multiple scales. A key motivation for writing this chapter has been to understand some of the system goals shaping MfE's activities, as a stepping stone toward thinking about how the politics of the bureaucracy works. Do bureaucrats make decisions that have consequences? If so, in what situations does this happen, and for what types of consequences? Inspired by a fine-grained approach to the actions of bureaucrats,

previous sections identified several scales at which bureaucrats exercise agency, albeit within the context of wider organizational narratives and political constraints. Here, I consider three broad scales in which agency and constraint are experienced: the individual scale, the Directorate scale, and the Ministry scale. At the level of individuals, bureaucrats exercise discretion over the design of projects, the enrolment of participants, the structure of exchanges, and the outputs of the process. These choices, as we saw with the Implementation team projects in Section 3.5, are not inconsequential for the content and structure of environmental policy. The design of the economics capability project, the relationship management program, and the NPSFM Review all required decisions about who to include and on which terms, about the purpose of the interactions, and control over the resulting products of the exchange. Officials made these decisions themselves in flexible and discretionary ways, influenced by several system goals. In terms of personal system goals, many officials espoused values of collaboration and an embrace of the bottom up co-design ethos being promoted by the new MfE leadership. In the case of the economics workstream, officials chose to draw on the co-design ethos to justify and promote a radically open deliberative process without a pre-defined output. In addition to individual values, officials also rationalize their work within the Directorate's mandate to support the evolution and development of the government's freshwater reform agenda, which includes specific policies and keywords (such as economic assessment), and a division of labour (see Section 3.6). Finally, officials draw on their organizational identities as public servants to justify and limit their actions. For example, the Ministry-wide requirement to not reproduce council functions meant that the economics capability funding could not resource councils that could not at least part-fund that work already. In the context of the new MfE leadership, the new pillars of MfE's identity – policy-plus, liveability, etc. – provide even more system goals that officials can creatively draw from as they interpret their roles, design projects, and undertake their work.

At the level of the Water Directorate, bureaucrats have discretion in the steering of policy agendas through strategic lesson-drawing, the selective democratisation of policy development, and the channeling of legitimate political forces (such as the Iwi Leaders Forum and the Land and Water Forum) into specific policy provisions that the Minister might be encouraged to accept. Many of the outputs from the ‘implementation’ side of the Directorate are also discretionary, such as the generation of guidance. The Minister’s office reads and signs off on reports, but rarely are significant changes requested. As officials make creative decisions in relation to these tasks, they must work in and around certain constraints. For example, while Directorate officials secured key gains for Māori and the Iwi Leaders Group through the revision of Te Mana o te Wai in the 2014 and 2017 NPSFM, officials could not explore policy options for granting Māori economic rights to water (as the Waitangi Tribunal has asserted exist). Other examples of locked-in policy preferences and conditions abound, such as the National government’s stated intention to double agricultural exports by 2025 (see Chapter 2), or the 2016 National Policy Statement on Urban Development Capacity which focussed on freeing up land for urban development without any reference to freshwater objectives. Since the Water Directorate was intended to drive a coherent whole-of-government approach to freshwater policy, it is ironic that the ability of the bureaucracy to achieve such coherence is constrained by the incoherence of the government’s own political policies and objectives. The work of Water Directorate officials is hemmed in by government statements and policies, though officials still can and do work to shape the policy agendas and specific proposals that the Minister will decide upon, as well as the interpretive context in which these proposals are understood.

For MfE as an organization, the contours of discretion to act are negotiated and secured through agreements with the Minister about budgets and broad programs of work. Because New Zealand has an administratively independent public service, the Minister cannot affect the distribution of budget and allocation of work beyond the formal agreement with the Secretary for the Environment (chief executive). So long as officials are acting within the

terms of this agreement, the Minister cannot demand changes to MfE's projects or practices, outside of formal policy advice requested. Because of this unique lever for securing some organizational autonomy, MfE leadership must carefully mobilize bridging concepts – such as natural capital and policy-plus – that simultaneously align with the government's objectives while providing discretionary space for MfE to pursue its own, longer term objectives. Thus, these bridging concepts provide the means of securing discretion from the government of the day, though it also constrains this discretion in particular directions. As Section 3.7 showed, the ideological flavour of terms like natural capital can provide evidence of neoliberalism while also providing a means to secure more-than-neoliberal objectives, such as the development of wellbeing metrics that extend beyond Gross Domestic Product. While a broad-brush analysis might infer neoliberal rationalities from the existence and prominence of terms like natural capital within MfE's framing documents, this 'ignores the agency of people to appropriate categories for their own objectives' (Mosse, 2005: 5).

By considering the agency and constraint experienced by MfE officials, the image of a mechanistic bureaucracy gives way to a world of plural intentions and multiple possibilities, sitting behind a veil of rational design and often neoliberal language. I have not argued that bureaucrats are all-powerful, or that they are the tail wagging the dog of elected politicians in government. Politicians and their party's policies do matter immensely, but *how* they matter is important to understand. The policies of political parties do not act as a coherent ideology that infuses and governs all state action. Rather, the political stances of politicians are better understood as a layer of system goals that must be rationalized with many other system goals. Within this rationalisation process lies discretion, and, perhaps, political opportunity to infuse egalitarian and environmental values into the functioning of the environmental state.

3.9 Conclusion

This chapter has examined the activities of MfE in relation to water policy implementation to identify whether and how bureaucrats exercise discretion in their work, and on what basis

they do so. I have sketched the work of the Implementation team, the Water Directorate, and MfE, by identifying significant discretionary activities and analyzing choices made within them. Since these activities are not published or otherwise available for public scrutiny, this chapter provides a first look into how MfE functions, what types of activities it undertakes, and how it is changing.

Metanarratives of neoliberal environmental governance help to identify structural changes within the state and clarify the potential risks and effects of these changes. Neoliberalism also provides a way to compare how New Zealand's environmental state differs from elsewhere, which allows consideration of what progressive elements might be worth defending, such as New Zealand's environmental bottom-lines approach, its significant decolonising energies, and relatively minor use of market mechanisms.

Regarding the question of ideological coherence, MfE's water policy activities are organized around multiple system goals – the division of labour in the Water Directorate, MfE's Ministry-wide buzzwords such as co-design, as well as formal government policy terms and positions such as rights and interest (excluding economic rights) and economics capability-building. In practice, the choices of bureaucrats are shaped by personal and organizational values, ranging from values of inclusive democracy, through to hierarchical forms of reward (i.e. 'servicing the Minister', fieldnotes 2016). The political ideology of the government of the day finds expression through named policy positions and out-of-bounds policy thinking, but outside of this, bureaucrats can and do formulate arguments for or against specific policies and projects, based on whether certain ideas are 'policy-ready' or whether they reflect wisdom drawn from international experience.

MfE is pursuing many inter-related activities to structure the institutional void around the NPSFM, but the purpose, shape, and political possibilities of these activities cannot be completely grasped through a broad-brush approach to the state. Rather, fine-grained analysis reveals that MfE's policy activities are multiply-determined, driven by the values of

MfE bureaucrats in response to several types of system goals. While bureaucrats are constrained by issues of budget, legislative mandate, Ministerial policy positions, and codes of professional conduct, their actions are not reducible to these constraints. Indeed, bureaucratic projects can involve creative assembly of multiple system goals – such as co-design and economics capability – into novel and perhaps even counter-neoliberal types of projects. While bureaucrats do not have equal power to Ministers, they do they have some and often significant agency to shape the intent, content, and outcomes of environmental policy, and it is in our interests to better understand the nature of this agency so that it might be repurposed toward securing a sustainable and just environmental democracy.

Chapter 4 - Spatial differences in water policy implementation: evils or opportunities?

4.1 Introduction

Environmental policies can introduce new policy objects for which there do not yet exist clear norms or standard routines. The resulting ambiguity or institutional void (Hajer, 2003b) faced by implementing actors is amenable for multiple interpretations. Previous chapters have treated the institutional void as a nationally-scaled phenomenon, that is, as if struggles over policy interpretation are waged nationally. But are interpretive possibilities also structured by the unique contexts and capacities of implementing places? This chapter examines the institutional void from a geographical perspective, asking how local authorities decide what implementation arrangements ‘fit’ for their unique configurations of circumstance. In doing so, I hope to identify how human and physical geographies affect which interpretations of policy (in the form of implementation programs) are favored and deemed worthy of staff, support, and funding. Put another way, I aim to evaluate whether the institutional void is best conceptualised at the national level, or whether different regions’ circumstances in turn affect the range of viable policy interpretations.

Like many national environmental policies across the world, New Zealand’s National Policy Statement for Freshwater Management is decentralized; that is, it places responsibility for implementation upon local authorities. Environmental decentralization involves the setting of high-level policy requirements at one spatial scale (say global agreements, or national policy), while allowing some discretion for local authorities in deciding upon the methods of implementation. Decentralized water policies are increasingly becoming the norm in many countries, such as the federalist systems of the United States (Doyle, 2012), Brazil (Empinotti et al., 2018), Canada (Dunn et al., 2014), and Australia (Wallington and Lawrence, 2008), as well as supra-national governance in the European Union (Kowalczevska et al., 2017). The

decentralization of environmental policy is often premised on the principle of subsidiarity, which states that resource management decisions are best made by the communities who are most effected by these decisions (Lemos and Agrawal, 2006; Larson and Soto, 2008; Berkes, 2010; Holley et al., 2012; Cohen and McCarthy, 2015). Proponents of decentralization contend that locally-tailored policy implementation is inherently more legitimate, accountable, and relevant to the ecosystems and human communities most affected.

Decentralization provides a legitimate basis for geographical variation in policy implementation. Implementing regions have their own unique biophysical environments, economic needs, and political forces (and associated factions), all of which affect the form and content of implementation activities. In addition, local authorities will have their own decision making cultures, power hierarchies, and institutional histories that influence how and why they undertake policy implementation. Governance scholars have argued that while some forms of decentralized discretion (such as biophysical variation, local demographics) are legitimate reasons for tailoring the shape of implementation programs, there are also illegitimate bases (such as organizational power hierarchies) for differences in implementation (Hill and Hupe, 2014). A key political question this raises is, how much – or what kinds – of variation in implementation is legitimate and acceptable?

I will explore this question by developing and contrasting two perspectives on policy implementation: top-down and bottom-up. Top-down forms of policy evaluation compare resulting implementation programs against the intent of the policy and the extent of compliance with policy requirements. This approach assumes that strict compliance is the most legitimate and desirable policy outcome, and views geographical non-compliance (or selective compliance) as an evil to be disciplined and punished (Hill and Hupe, 2014). Bottom-up analysis, in contrast, looks at the local purposes and (often constrained) practices of implementing actors, seeking to explain the shape of implementation programs before classifying them in a normative frame. By analysing local accounts of five New Zealand

regions charged with implementing the National Policy Statement for Freshwater Management (NPSFM), I will take two different looks at these regions implementation programs, and ask what a geographically-sensitive analysis of policy implementation might look like.

Section 4.2 reviews the literature on policy implementation, with a focus on the top-down and bottom-up debates in political science and public administration. I argue that efforts to systematize and control policy implementation have largely ignored the constraining aspects of local context and the creative work of local policy actors in the policy process. To support a revaluing of these invisible elements, I advocate for a focus on the local logics of policy implementation, and the bricoleurs or creative policy actors who piece together disparate policy elements into a coherent design. Section 4.3 describes the broad context of the study, and my method of data collection and analysis. Section 4.4 presents a stylized synthesis of the Ministry for the Environment's Review of NPSFM implementation to provide an empirically-sourced top-down view of policy implementation. Against this, Section 4.5 presents my accounts of the implementation programs for each of five case study regions, highlighting the intent, coherence, and specific form of the NPSFM approach taken in each region. Section 4.6 then compares the top-down view with the locally-grounded accounts, arguing that a bottom-up view is a valuable complement to the top-down view as it enables a reflexive analysis of the policy design and a grounded diagnosis of local conditions. I conclude by arguing that a more nuanced and positive reading of spatial variation can support the identification of opportunities for policy activism at local and national scales.

4.2 Policy implementation in 3-D: top-down, bottom-up, and spatial perspectives

The formal study of public policy implementation emerged through the disciplines of political science, sociology, and public administration from the 1970s (see Hill and Hupe, 2014). Since then, the field has been animated by debates between 'top-down' and 'bottom-up' perspectives regarding which constitutes the most legitimate form of policy implementation.

Here I briefly outline how these perspectives conceptualise policy implementation, before introducing out two concepts that will support my bottom-up analysis.

4.2.1 Policy from above and below

The top-down approach to policy implementation accepts state policy as a formal and legitimate statement of the public interest, and considers deviations from policy requirements in the implementation process as illegitimate ‘evils’ that should be prevented with study and foresight (Pressman and Wildavsky, [1973] 1984: xx). As Pressman and Wildavsky ([1973] 1984: xxv) note in their foundational text, ‘Implementation cannot succeed or fail without a goal against which to judge it.’ Research in this vein has developed increasingly comprehensive formal models of the policy making and implementation process, aiming to ‘identify the factors which affect the achievement of statutory objectives’ (Sabatier and Mazmanian, 1980: 541) and by doing so explain the ‘implementation gap’ between policy intent and practical outcomes (Hill and Hupe, 2014: 10). Recommendations are often made to reduce this gap through policy design, institutional reconfigurations, a stronger chain of command, better information flows, and more flexible management of human resources (see Hill and Hupe, 2014, for a review). Hupe et al. (2014) contend that top-down studies and government evaluations of policy implementation tend to assume that i) policy is a coherent and rational expression of interlinked ambitions, ii) policies enacted by elected politicians are legitimate whereas decisions about implementation by unelected bureaucrats are not, and iii) policy speaks for itself, requiring no active interpretation.

The bottom-up approach to the study of policy implementation emerged in the 1980s as a critique of the top-down view (see Hill and Hupe, 2014). While Sabatier and Mazmanian (1980) long ago noted that the clarity of policy language is important to realizing effective implementation, Hupe et al. (2014) illustrate that not only are policies written with intentionally vague terminology, but they can also be unclearly related to the daily routines and logics that structure the action of implementing actors. This makes creative

interpretation necessary (see also Mosse, 2005). Lipsky's ([1980] 2010) influential book *Street-Level Bureaucracy* examined policy implementation from the perspective of teachers, police officers, and other front-line government service providers, as they juggle competing demands for their time and resources to implement policy directives. Street-level bureaucrats, Lipsky asserted, must act within constrained situations and to cope with this they develop rules of thumb to guide their activities. Lipsky argued that not only was discretion an *unavoidable* part of the work of street-level bureaucrats, but it was *necessary* from a democratic perspective, as policies do not and cannot prescribe action for every conceivable situation. Judgements need to be made about how to reconcile competing policy objectives such as equity with efficiency, for example, and street-level bureaucrats have relevant and legitimate knowledge that should inform these judgements.

In contrast to the top-down view, the bottom-up approach to implementation is agnostic about the coherence and absolute legitimacy of policy (Yanow, 1996). Attention is focused upon how implementing actors craft responses to policy requirements by weighing up competing organizational capacities, priorities, and resources, and constructing implementation programs that integrate these elements (Freeman, 2007; Hupe and Hill, 2007). Normatively, the bottom-up view emphasizes the legitimacy of street-level bureaucrats, seeing them as integrators of multiple legitimate aims, who require support and resourcing and not just hierarchical discipline and control (see Hupe et al., 2014). Analytically, the bottom-up view is concerned with explaining what bureaucrats do and why, rather than strictly gauging policy compliance.

4.2.2 Implementation as geographical bricolage

To operationalize a bottom-up approach to policy implementation, concepts are needed that can provide structure for the contents of a case while not narrowly determining what such contents might include. Two such concepts have emerged from critical policy studies and geography: the 'logic of the local' and bricolage. The concept of bricolage was first introduced

by Lévi-Strauss (1966) and has been developed in recent years for thinking about how policies are interpreted and responses composed (Freeman, 2007; Carstensen, 2011) including in contexts of environmental governance (Cleaver, 2012; Beunen and Patterson, 2017; Peloso and Harris, 2017). Bricolage refers to the process of piecing together disparate pre-existing elements – such as policy requirements, organizational norms, political interests, environmental information – to create a novel solution to a problem. When a bricoleur is faced with a task, they use ‘whatever is at hand’ to accomplish it, even if their tools and resources are not fit for purpose (Lévi-Strauss, 1966: 17). This process of assembling elements through bricolage acts as a mechanism for institutional change, which relies upon – while also exceeding – the intentionality of bricoleurs. This metaphor of ‘piecing together’ policy provides a methodological focus for identifying the who engages in policy interpretation and how it is affected by geographical elements.

When used to study policy, bricolage emphasises how constrained institutional actors mobilize local resources to engage in policy development and implementation. The shape of policy implementation is pieced-together from local, historical, individual, and networked elements that are accessible to bricoleurs (see Freeman, 2007; Carstensen, 2011). A resulting environmental policy, for example, will be analysed for how it has been adapted to fit local categories and languages, how it relies upon historical precedents and structures (i.e. path-dependency), and how it is shaped in form and substance by the interests and capacities of the bricoleurs and their specific networks (see Cleaver, 2012; Merrey and Cook, 2012). A key strength of the bricolage concept is that it emphasises both the constraints that actors face – in terms of the limited tools and resources they have available to them – as well as the agency that they can enact through their selection and creative mobilization of elements (Lévi-Strauss, 1966; Carstensen, 2011).

While the bricolage concept helps to characterise the *how* of policy implementation, recent urban policy scholarship on the ‘logic of the local’ provides a way of thinking about the *why*.

Blanco et al. (2014) have argued that instead of conceptualizing cities as sites for the playing out of a universal logic of neoliberal capitalism, scholars should consider how local governments exercise agency by translating national policies and 'global' concerns (such as profit-making) into local regulatory arrangements and development projects. The 'logic of the local' (Blanco et al., 2014: 3129) emphasises how local governments can strategically repurpose such policies to pursue democratic and egalitarian economic arrangements within a place. Blanco et al. suggest that the logic of the local can be studied comparatively by focussing on i) the way the policy problem is framed, ii) how policy champions (such as consultants) make sense of local conditions and possibilities, and iii) which practices are used to assemble policy problems and remedies. The aim is to develop a 'comparative critical local governance' (Blanco et al., 2014: 3141) that avoids subsuming local implementation practices within global explanatory logics (or national policy requirements), while also recognizing that place-based implementation will not be independent of these logics.

Together, the concepts of bricolage and the logic of the local can be brought together to understand policy implementation as a process of geographical bricolage. Geographical bricolage draws attention to the activities of bricoleurs, who mobilize place-based resources within constrained circumstances to creatively assemble policy requirements for purposes that are not limited to policy compliance. In comparison to the top-down perspective which treats compliance as the most legitimate outcome of policy implementation, a view of policy as geographical bricolage allows us to see in greater detail how implementation practices are composed, and from that detail we can make clearer evaluations about what counts as legitimate deviation from policy intent.

4.3 Approach, context, and methods

The aim of this chapter is to understand the merits and limitations of bottom-up and top-down approaches to analysing geographical differentiation of policy implementation. The implementation of New Zealand's National Policy Statement for Freshwater Management

(NPSFM) provides the object of empirical analysis. The NPSFM requires New Zealand's 16 regional councils to enact its requirements through regional planning processes (New Zealand Government, 2011). While the 2011 NPSFM provides directs regional councils to set water quality and quantity limits for waterbodies within their regions, it left to councils' discretion the methods with which to accomplish these tasks. In this way the NPSFM provides an illustrative example of a decentralized environmental policy, wherein central government sets broad parameters for environmental decision making while delegating implementation to local bureaucracies (Lemos and Agrawal, 2006; Cohen and McCarthy, 2015; Zuidema, 2017).

The NPSFM was enacted in 2011 and revised in 2014 and 2017. In 2016 the Ministry for the Environment undertook a formal Review of the implementation of the NPSFM across all 16 of New Zealand's regional councils, publishing a national synthesis report and 16 separate regional reports in 2017 (see MfE, 2017e). In Section 4.4, I will synthesize findings of this Review in relation to the five regions examined in this chapter, to provide a top-down perspective of policy implementation in these regions. In Section 4.5, I draw on documents and interviews with regional and national policy actors to construct local accounts of policy implementation for each of five regions: Northland, Auckland, Waikato, Hawkes Bay, and Wellington. I consider how constrained actors read their local institutional landscapes for opportunities for democratic and environmental planning innovation, and how they consequently secured political support and investment (or not) to undertake projects that generate hybrid local-and-national outcomes. Some regions have been spotlighted by MfE as successful, and others as deficient in some way. A key purpose of this chapter is to contrast MfE's evaluations with those of the bricoleurs and the objectives they sought to achieve.

I selected these five regions based on five main criteria. First, to consider differences in institutional capacities and resources, the largest council was selected (Auckland) and one of the smallest (Northland), with the rest in between. Second, I sought diversity in land use.

Auckland contains New Zealand's largest city, Wellington and Waikato have significant cities within larger areas of rural land use, and Northland and Hawkes Bay are dominated by rural land uses. Third, in terms of acute environmental pressures, Auckland is illustrative of the problems posed by urban development for water management, and Waikato has been subject to dramatic agricultural intensification since the late 1990s, making it a significant site of ecological degradation from agricultural pollution. Other regions have unique acute issues as well. Fourth, I wanted to consider how existing environmental conflict might shape the implementation of the NPSFM, so I chose Hawkes Bay and Waikato, which both have been sites of intense recent conflict, as well as Auckland and Wellington, for which freshwater had not been nationally politicised (prior to 2017). Fifth, I wanted to explore how iwi/hapū Treaty settlements with the Crown affected policy implementation. The Waikato-Tainui settlement in the Waikato region is one of the most substantial Treaty settlements in the country (Dingfelder, 2016), as it involves significant shared decision making authority between the regional council and iwi. Northland, Hawkes Bay, Auckland, and Wellington iwi/hapū are in different stages of settlement with the Crown, and have different relationships with their councils.

To understand the local logics of policy implementation in each of these five regions, I conducted interviews with past and present regional council staff involved with the implementation of the NPSFM. I interviewed four council staff from each of Northland, Waikato, Hawkes Bay, and Wellington regional councils. Since Auckland Council is a much larger organization undergoing rapid institutional change, I interviewed five council staff and two consultants, and I interviewed one person twice. Existing personal contacts and secondary networks (i.e., asking around) provided an initial source of likely council contacts, and I also asked MfE relationship managers for introductions to relevant policy contacts at regional councils. For each council I spoke to a policy manager, at least one policy adviser/planner, and at least one scientist. Different councils have different structures so not all positions or teams are equivalent, but by talking to four people my aim was to get a handle

on i) the strategic narratives around NPSFM implementation, ii) the operational view of policy in local context, and iii) the environmental and political context of local environmental pressures and regulation.

There are at least two limitations in my research design. First, if I had spoken to different staff I would likely have produced slightly different accounts. However, in all five cases, named individuals were cited by multiple staff as key drivers of policy implementation work, and I interviewed at least one of these named 'champions' in every region. The local implementation accounts constructed here have been pieced together around the actors driving activities. By speaking also to peripherally-involved staff I can triangulate accounts to some extent. A second limitation is that I did not interview policy actors from outside regional councils, for instance, iwi/hapū, environmental groups, industry, groups, or residents. These actors may have very different assessments of the purpose and achievements of the regional councils' activities, so this constitutes a valid limitation. It reflects a logistical challenge for my study which examines five regions in light detail rather than one or two regions in depth. To a significant extent I am relying on the accounts of council staff, however I do not treat every statement as fact and this is not necessary for my analysis or conclusions to be robust.

Interviews were conducted in August and September 2016, and March 2017, and averaged around 50 minutes in length. Each interview was unique, and the topics discussed depended upon the expertise of the interviewee, my relationship to them, and what I knew about the region. After discussing the background and knowledge of the interviewees, discussion generally turned to their specific engagement with the NPSFM, how they felt about the approach being taken, and what they have learned about it. For most participants, I encouraged them to reflect on what is unique (biophysically, historically, culturally) about their region and what challenges and opportunities they feel are presented through these constellations of circumstance. My objective is to reconstruct the implementation logics for

each of five regions, to provide a sense of the strategic terrain of action (challenges and opportunities) that these bricoleurs are seeing and acting on.

4.4 The view from the top: MfE and the compliance mindset

The Minister for the Environment intends to seek an independent review of the implementation and effectiveness of this national policy statement in achieving all its objectives and policies and in achieving the purpose of the [Resource Management] Act, no later than five years after it comes into force. (New Zealand Government, 2011: 5)

In March 2016, the Minister for the Environment tasked government officials with undertaking a review of the implementation of the NPSFM. For this, officials sought information from two primary sources. First, officials circulated a questionnaire to all 16 regional councils requesting information on their progress toward each policy requirement of the NPSFM (see Figure 5). Councils were also asked to indicate a timeline for completion and a description of activities undertaken and intended for each policy requirement. Regional councils filled these out with different levels of detail; Tables 10 and 11 compare the descriptive responses to Policy CA1 and CA2(a) across the five case study regions. The second primary source of information for MfE's review was a series of focus-group style discussions undertaken in every region. Teams of MfE officials visited every regional council and organized discussions with 1) council chief executives and regional councillors, 2) regional council staff, 3) local iwi/hapū, and 4) local stakeholders, including environmental and industry groups (see MfE, 2017e).

Figure 5. Snapshot of part of NPSFM implementation review questionnaire issued to regional councils. Reproduced with permission from MfE. Source: personal copy.

Policy	Policy requirement	Progress towards implementing this policy				What is your planned or actual completion date for this task? ¹	Describe what steps you have taken, or intend to take, to implement this policy
		Not yet started	In progress	Complete or ongoing programme established	Not applicable		
Preamble	<i>The council has reflected Te Mana o te Wai in implementation of the NPS-FM</i>						
Objective A2 (a)	<i>The council has taken steps to ensure significant values of outstanding freshwater bodies are protected</i>						
Objective A2 (b)	<i>The council has taken steps to ensure significant values of wetlands are protected</i>						
Policies A1 & B1	<i>Establishing freshwater objectives in accordance with Policies CA1-4²</i>						
Policy CA1	<i>The council has identified freshwater management units (FMU) that include all freshwater bodies within its region</i>						
Policy CA2(a)	<i>In each FMU, the council has considered how all the national values, listed in Appendix 1, apply to local and regional circumstances</i>						
Policy CA2(b)	<i>The council has identified the applicable values in each FMU, which must include the compulsory values, listed in Appendix 1, as well as any other non-compulsory national values, also listed in Appendix 1, and any other values the council thinks appropriate</i>						

Findings from discussions and questionnaires were analysed by officials, and the Review was published in two forms. Unique reports were published for each region, outlining the resource management context, the planning processes being used, and key ‘successes and challenges faced’ (MfE, 2017e: 6). These reports generally ranged from 15-30 pages in length, and included an overall evaluation by MfE officials of specific regional councils’ implementation programs. In addition, a 65-page ‘national themes’ report was published (MfE, 2017e), synthesizing regional findings into 11 themes: NPSFM implementation progress, achieving objectives of the NPSFM, community engagement and collaboration, engaging with iwi and hapū, engaging with territorial authorities, decision making, capacity and capability for freshwater planning, information, plan implementation, government direction, and government support. This synthesis report compared regional councils’ implementation programs across these themes, highlighting councils that have excelled in a specific area, as well as highlighted those that are struggling. Table 12 summarises the comparative evaluations made within the national themes report.

Table 10. Five regional councils’ responses to MfE’s questionnaire regarding Policy CA1: ‘The council has identified freshwater management units (FMU) that include all freshwater bodies within its region.’ Source: personal copy of MfE questionnaire.

<p>Northland Regional Council (ongoing)</p>	<p>We have established water quality and quantity FMU for all Northland’s rivers, lakes and aquifers as follows:</p> <p>Water quality: two river water quality management units (lowland and hill country) based a threshold of 15° slope. Different water quality objectives are applied within the lowland and hill country FMU and are typically a reflection of current state and uses/values.</p> <p>Water quantity: rivers are grouped into four river water quantity management units (coastal rivers, small rivers, large rivers and outstanding rivers). The objectives for each FMU reflect ecological sensitivity and providing for social economic well-being (security of supply).</p> <p>Lakes: we have grouped lakes into two lake management units based on lake depth (a threshold of 10m is used to distinguish these). Lake depth was found to be the best ‘predictor’ for water quality and sensitivity to extraction of water.</p> <p>Aquifers: we have identified four groundwater management units: Mapped aquifers (specific allocation limits); mapped coastal aquifers; unmapped coastal aquifers; unmapped other aquifers.</p>
<p>Auckland Council (in progress)</p>	<p>Auckland Council is considering delineating up to 10 FMUs based on surface water catchments and coastal receiving environments, while recognising that groundwater resources may extend beyond the surface water catchments.</p>
<p>Waikato Regional Council (ongoing)</p>	<p>Surface water allocation limits are set for all surface water bodies. Refer to Healthy Rivers Wai Ora website – technical reports and Collaborative Stakeholder Group minutes. http://www.waikatoregion.govt.nz/healthyrivers/</p>
<p>Hawkes Bay Regional Council (in progress)</p>	<p>Tukituki = complete insofar as various ‘management zones’ apply within Plan Change 6 (currently being undertaken). NB: Most of PC6’s content pre-dated NPSFM2014. TANK and Mohaka catchments = in progress as part of stakeholder engagement processes as per PIP (Progressive Implementation Program). Other catchments = not yet started as part of stakeholder engagement processes as per PIP.</p>
<p>Greater Wellington Regional Council (in progress)</p>	<p>FMUs are being developed for water quantity and quality in the Ruamāhanga catchment (due to be completed January 2017) and for Te Awarua-o-Porirua catchment (due to be completed 2018) as part of the respective whitua processes. The three other major catchments are yet to commence whitua processes but will be completed by 2022 (as stated in the GWRC NPS-FM Progressive Implementation Program).</p>

Table 11. Five regional councils’ responses to MfE’s questionnaire regarding Policy CA2(a): ‘In each FMU, the council has considered how all the national values, listed in Appendix 1, apply to local and regional circumstances.’ Reproduced with permission from MfE. Source: personal copy of MfE questionnaire.

<p>Northland Regional Council (ongoing)</p>	<p>Water quality: The draft water quality objectives for each FMU reflect the compulsory values for ecosystem and human health in lakes and rivers.</p> <ul style="list-style-type: none"> • The life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh and coastal water, • Sustainable mahinga kai, • Human health during secondary contact recreation in rivers and tidal creeks, and • Human health during primary contact recreation in regionally significant river swimming sites, lakes, estuaries, and open coastal waters. <p>It is important to note that recent research strongly suggests that it is not possible to achieve the optional <i>E.coli</i> attribute states for primary contact recreation (swimming) in Northland rivers and the Waikato and Waipa rivers using available mitigations (e.g. stock exclusion). There could be several reasons for this including that the compliance metric (95th percentile) or maximum tolerable health risk correlated with the <i>E.coli</i> indicator could possibly be too conservative and/or our understanding of the effectiveness of mitigation actions are incorrect. Therefore we are not intending to include the optional <i>E.coli</i> attribute states for primary contact recreation in the new regional plan. The council will wait on further research to be undertaken on the relative risks of different faecal sources (in terms of pathogens other than <i>Campylobacter</i>) to human health and the effectiveness of different mitigations, and ultimately a review and revision of the optional attribute states in the NPS-FM.</p> <p>Water quantity: The draft objectives and limits expressly consider ecosystem health, mahinga kai and reliability of supply for water users.</p> <ul style="list-style-type: none"> • The natural hydrological variation of outstanding freshwater bodies and natural wetlands is protected, • The hydraulic habitat of flow sensitive native fish species is maintained in rivers so that there is no decrease in species abundance, diversity and local populations, • Flows and water levels support sustainable mahinga kai,
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	<ul style="list-style-type: none"> • The extent of littoral zones in natural lakes is maintained, • Saline intrusion to coastal aquifers and land subsidence above all aquifers is avoided, and • Water users have a high reliability of supply. <p>Priority Catchments: uses and values have been identified in the draft catchment plans for the 5 priority catchment groups – the groups used the national values listed in Appendix 1 of the NPSFM as a basis but these were expanded upon where relevant to the catchment / community.</p>
Auckland Council (in progress)	Council staff have prepared internal reports on how national freshwater values could be applied to regional and local circumstances, as an aid to those staff implementing the NPSFM within the Auckland region. The proposed Hauraki Gulf Islands Freshwater Management Unit is being used as a worked example for considering how national values apply to local and regional circumstances, such that learnings can be considered for other proposed FMUs.
Waikato Regional Council (ongoing)	[Left blank by council staff]
Hawkes Bay Regional Council (in progress)	Tukituki = partly complete insofar as PC6 is operative but most content pre-dated NPSFM2014. TANK and Mohaka catchments = in progress as part of stakeholder engagement processes as per PIP. Other catchments = not yet started as part of stakeholder engagement processes as per PIP.
Greater Wellington Regional Council (in progress)	Consideration of how the national values apply is currently being considered for Ruamāhanga catchment (due to be completed January 2017) and for Te Awarua-o-Porirua catchment (due to be completed 2018) as part of the respective whitua processes. The three other major catchments are yet to commence whitua processes but will be completed by 2022.

Table 12. Comparative evaluations of regional councils by thematic criteria (from MfE, 2017e). Only the six themes listed here contained comparative evaluations in the MfE report. I have bolded the regions that are examined in this chapter.

Thematic evaluative criteria	Doing well	Struggling
Overall progress toward implementing the NPS-FM	Horizons, Canterbury, Waikato , Otago	Auckland, Southland, Taranaki
Engagement with communities	Canterbury, Waikato, Wellington	Otago, Nelson, West Coast, Taranaki, Auckland
Involvement of iwi/hapū	Horizons, Wellington , Waikato , Canterbury, West Coast	Taranaki, Northland , Gisborne, Marlborough, Hawkes Bay
Engaging with territorial authorities	Canterbury, Auckland , Gisborne, Nelson, Tasman, Marlborough	None specified
Capacity and capability	Waikato , Canterbury, Wellington , Bay of Plenty, Otago, Southland, Auckland	Gisborne, Northland , Tasman, West Coast
Monitoring and information	Horizons, Waikato , Canterbury, Wellington	West Coast, Northland , Gisborne

The MfE Review includes mostly top-down elements with some bottom-up elements. It systematically describes the planning processes used by councils, and provides ‘a commentary on the likely outcomes and effectiveness of council implementation’ of the NPSFM (MfE, 2017e: 14). The Review also distills practical lessons from regional experiences in a somewhat inductive manner, and reports some stakeholder observations that are critical of government policy design and MfE’s implementation support (see *ibid*: 61-5). The MfE synthesis report concludes, however, that while some regions have clearly struggled because of the design of the NPSFM and the actions of central government, ‘we do not believe this is a valid reason for not implementing the NPS-FM’ (*ibid*: 64).

Top-down evaluations of policy implementation compare local practices against the intent of policy and its specific prescriptions. The MfE Review explicitly compares actions against policy prescriptions, and implicitly adopts the normative stance that strict compliance with

the NPSFM is the most legitimate and desirable outcome. The Review does not consider local objectives for policy implementation as valid reasons for non- or partial compliance, and the Review does not undertake (as a true to-down analysis should) a reflexive analysis of the design, unintended effects, and contextual elements linked to NPSFM implementation. I will return to offer a more generous reading of MfE's Review, but before that we must look at the varieties of policy implementation in the regions.

4.5 The view from below: the local logics of implementation in five regions

A bottom-up view of policy focuses on understanding the causes and consequences of the specific implementation practices. While the top-down perspective evaluates implementation programs against prescribed policy requirements (assuming all requirements will be met), a bottom-up view interprets local actions within the terrain of local institutional politics and unique capabilities. Put differently, the bottom-up perspective is concerned with the *why* of policy implementation. Understanding *why* policy implementation takes specific shapes within local settings is crucial to characterising and evaluating the environmental and democratic outcomes of decentralized environmental policy. If the top-down perspective focuses whether national policy requirements have been fulfilled, it risks ignoring the local trade-offs and constraints that implementing actors face when deciding whether to invest resources in meeting national requirements versus resolving local environmental and political problems. The bottom-up perspective focuses how implementing actors decide what requirements to implement, why, how, and against what institutional and personal barriers.

This section examines how regional council staff have translated the NPSFM into local implementation programs for five regions in New Zealand (indicated in Figure 6). I focus broadly on two aspects of policy implementation: the approach to community engagement (i.e., soliciting 'local and national values', New Zealand Government, 2014: 4), and the approach to setting environmental limits. Setting environmental limits involves specifying named 'freshwater management units' for which those biophysical limits apply, as well as

developing a process for formally including these limits into regional plans. To clarify: my objective here is not to render an evaluation of ‘successful’ or ‘failed’ forms of community engagement, nor designate better or worse limit-setting frameworks. Rather, my focus is on explaining the specific character of implementation programs so that we can understand why they take the shape that they do.

Figure 6. New Zealand’s 16 regional councils, with five study regions shaded. Map credit: Kati Doehring.



For each region, I discuss i) the political and environmental milieu affecting the local objectives of implementation, ii) the roles of bricoleurs in reading the political landscape and assembling unique policy elements to fit local problems, and iii) a high-level characterization of the implementation program. Through these accounts, I will argue that regional council staff can be understood as bricoleurs who creatively diagnose problems in regional environmental politics, and who strategically marshal resources and political support to enact novel participatory arrangements for environmental decision making. Understanding policy implementation as constellations of problem-bricoleur-solution packages can provide insight into how decentralized national policies can translate into local environmental and democratic outcomes. To examine implementation across five regions, I sacrifice depth to achieve breath of coverage. I refer to MfE's regional reports for further detail about relevant environmental, socio-economic, and regulatory contexts for each region (MfE, 2017e).

Table 13 presents information on population, regional council revenues, land use, and other demographic variables for New Zealand's 16 regions and regional councils. The regions of Northland, Auckland, Waikato, Hawkes Bay, and Wellington exhibit diversity across a range of environmental, institutional, and political criteria. These are all North Island regions; I recognize this is a limitation. I considered Tasman and Canterbury regions for South Island representation, but based on advice from New Zealand colleagues I decided that Canterbury was both well studied and exceptional in terms of its non-democratic institutional arrangements. Hawkes Bay allows me to explore a similarly semi-rural region, with recent high-profile conflict over the Ruataniwha dam.

Table 13. Area, land use, and demographic variables for New Zealand's regions.

Region	Area (km ²) ⁶	% Area Urban (2012) ⁷	Population (2013 census) ⁸	% Māori (2013 census) ⁴	Gross Domestic Product per person (\$ year ending Mar 2013) ⁹	Rates (i.e. local property taxes) in thousands of dollars (2013) ⁵	Median income per week (\$, in 2013) ¹⁰	# livestock/km ² (2013) ¹¹
Northland	12,501	0.8	151,692	29.6	32,521	17,085	821	97
Auckland	4,942	11.0	1,415,550	10.1	52,404	1,340,557	1325	91
Waikato	23,900	1.1	403,638	20.7	42,899	75,283	1112	182
Bay of Plenty	12,071	1.3	267,741	25.7	40,871	30,519	1058	63
Gisborne	8,386	0.3	43,656	45.1	33,568	49,705	994a	215
Hawkes Bay	14,138	0.6	151,179	22.9	39,648	14,438	994a	254
Taranaki	7,254	1.0	109,608	16.6	76,985	8,843	1230	173
Manawatū-Wanganui (i.e. Horizons)	22,221	0.6	222,672	19.6	37,434	35,752	949	295
Greater Wellington	8,049	2.5	471,315	12.4	61,938	91,198	1424	227
Marlborough	10,458	0.3	43,416	11.0	48,979	52,965	1080b	64
Nelson	422	6.6	46,437	9.0	40,000	58,112	1080b	20
Tasman	9,616	0.3	47,157	7.3	40,000	54,957	1080b	38
West Coast	23,245	0.1	32,148	9.9	48,015	3,707	1080b	12

⁶ Source: Statistics New Zealand. <http://archive.stats.govt.nz/StatsMaps/Home/Boundaries/geographic-boundary-viewer.aspx>

⁷ Source: Ministry for the Environment. <https://data.mfe.govt.nz/table/52469-land-use-land-cover-classes-1996-2001-2008-and-2012/>

⁸ Source: Statistics New Zealand. <https://www.stats.govt.nz/>

⁹ Source: Statistics New Zealand Infoshare. <http://archive.stats.govt.nz/infoshare/?url=/infoshare/>

¹⁰ Source: Statistics New Zealand. <http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7480>

¹¹ Includes dairy and beef cattle, sheep, and deer. Source: Ministry for the Environment. <https://data.mfe.govt.nz/document/11139-livestock-numbers-200214-xlsx/>

Canterbury	44,505	0.8	539,436	7.8	49,391	79,390	1209	164
Otago	31,186	0.5	202,467	7.1	44,660	15,311	1173	196
Southland	31,196	0.2	93,339	12.4	50,457	12,333	1154	173
National	264,090 (tot)	0.9 (tot)	4,242,048	14.1	49,140	-	1218	159

4.5.1 Wellington – pre-emptive collaboration in a low-conflict environment

The Wellington region is characterised by relatively mild environmental pressure, relatively positive relations between Māori iwi, and council a proactive freshwater planning context. Containing the country's second largest city (Wellington), a nearby urban growth centre (Porirua), and with large tracts of agricultural land use and forest, the Greater Wellington region has a substantive ratings base (i.e. revenue from local property tax) and spatially variegated ecological pressures. About half the region's area is used for pastoral sheep and beef farming, a third occupied by native vegetation, and the remainder a mixture of forestry (8%), dairy farming (5%), urban and other uses (MfE, 2017h). Since 2009, all regional planning goes through Te Upoko Taiao (Natural Resources Plan Committee), a 12-member Committee consisting of six elected councillors and six iwi representatives, where iwi and council have equal voting powers. Te Upoko Taiao was initiated on a voluntary basis by the regional council rather than being compelled by Treaty settlement legislation, and this initiative is cited by council staff and other evaluations as contributing to a generally positive relationship between council and iwi (interview, GWRC-4a, 2016; see also Dingfelder, 2016).

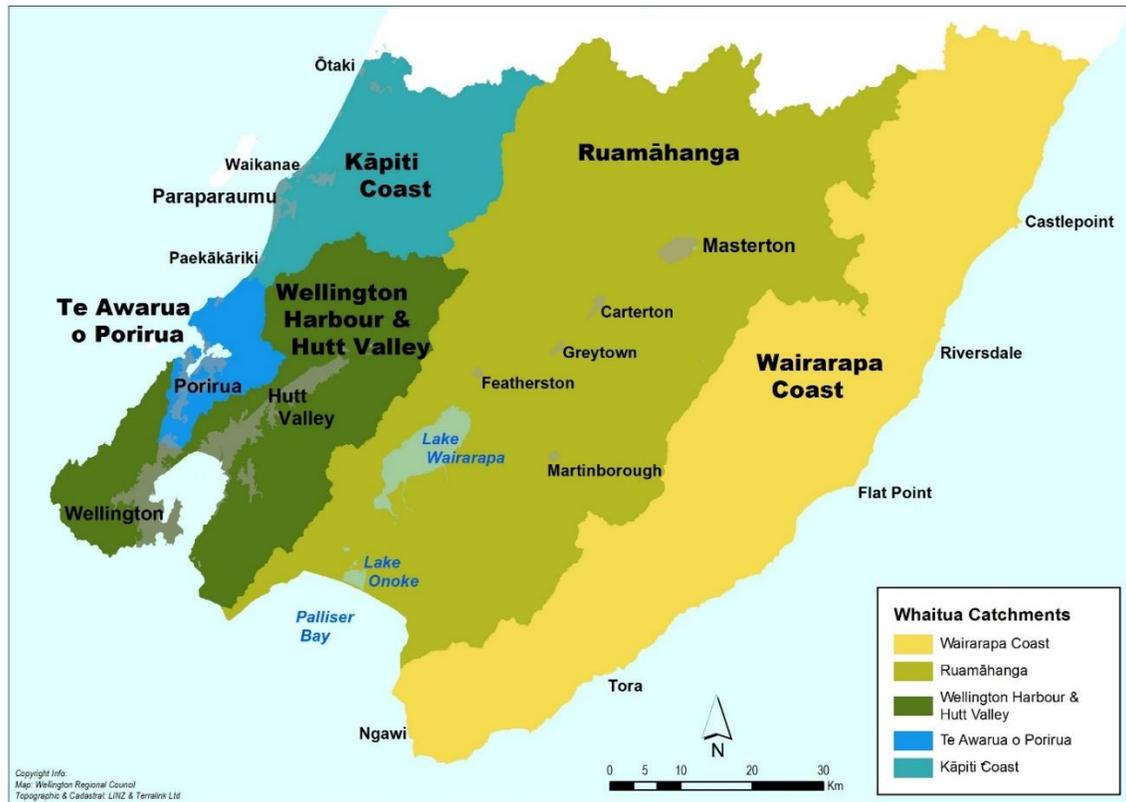
When the 2011 NPSFM was enacted, staff within Greater Wellington Regional Council were already thinking about how the council might 'improve' their environmental planning processes to be less litigious and with a stronger science foundation (interview, GWRC-4a, 2016). Though the region did not (then) have national headline-grabbing stories of acute ecological degradation, a cohort of staff at the council constructed and promoted a proactive approach to NPSFM implementation involving the creation of collaborative community groups to advise upon limit-setting, which would be supported by massive investments in scientific modeling, and overseen by Te Upoko Taiao. Several council managers and operational staff had 'game-shifting' experiences working with the Land and Water Forum, and were convinced that a collaborative process was 'the way to go' (interview, GWRC-4a, 2016). This personal experience inspired the direction and specific structure of the proposed

collaborative process. Bricoleurs found political support in the leftist chair of the regional council, although there remained ‘quite a lot of resistance’ to collaboration from within the bureaucracy (interview, GWRC-4a, 2016). The timing of the 2011 NPSFM was ‘coincidental’, yet provided ‘a useful way of getting [a collaborative approach] over the line politically’ to secure investment and support within the bureaucracy (interview, GWRC-4a, 2016).

Greater Wellington Regional Council’s approach segments the region into five freshwater management units, called Whaitua (see Figure 7). Each Whaitua will have a Committee charged with identifying freshwater objectives, developing and testing policy scenarios, and recommending planning limits to council through a Whaitua Implementation Program. The council’s existing proposed regional plan currently sets defaults for water quality and quantity limits for all areas, allowing each Whaitua area to have their limits updated based on the recommendations produced. The Ruamāhanga Whaitua began in 2013 (and has published a draft implementation program), and the Porirua Whaitua started in 2015. Wellington and Hutt Valley will be the next Whaitua to begin, once Ruamāhanga finishes.

Each Whaitua Committee has 13-14 members, with iwi and territorial authorities appointing their own members, and the rest appointed by the regional council. Greater Wellington Regional Council advertises for eight citizens, selecting them based on a balance of interests, interpersonal skills, and evidence of community leadership. Committee members are required to represent their local community rather than any special interests. Bricoleurs justified this approach by deferring to Canterbury’s approach to citizen-representation, a choice that has not been without consequence. Since industry organizations are not granted automatic inclusion (and veto power) in the Whaitua committees, some industry groups have behaved ‘like a shark circling’ outside the Whaitua process, ‘and they regularly lob grenades’ (interview, GWRC-4a, 2016).

Figure 7. The five Whaitua for the Greater Wellington area. Reproduced under a Creative Commons Attribution 4.0 International Licence. Source: Greater Wellington Regional Council. <http://www.gw.govt.nz/assets/Environment-Management/Whaitua/whaituamap3.JPG>



A novel and perhaps radical feature of Wellington’s approach is its Collaborative Modelling Project, which supports each Whaitua Committee (Robb and Harmsworth, 2016). The regional council has historically lacked a robust information base for environmental planning, and the Collaborative Modelling Project remedies this by assembling a hub of nationally recognized scientists to build state-of-the-art hydrological models to underpin Whaitua decision making (for example, by testing scenarios for different numerical limits). The Collaborative Modelling Project includes science teams for each Whaitua, composed of external scientists who are ‘leaders in their field’ (interview, GWRC-4a, 2016) tasked with providing services to the Whaitua Committee as their ‘client’ (interview, GWRC-4b, 2016).

Rather than the council providing the science, the Collaborative Modelling Project provides independent evidence to the Committee, on the rationale that the Collaborative Modelling Project will provide evidence that cannot be ‘shot at’ in Environment Court by industry groups (interview, GWRC-4b, 2016).

To bridge the scientific knowledge of the modeling team and the local knowledges of the Whaitua Committee, ‘weavers’ are contracted to support Whaitua Committee to help understand the modeling, and to facilitate knowledge co-production between groups and epistemologies. The Collaborative Modelling Project was built this way to enable the meaningful integration of Māori knowledge – mātauranga – with Western science. This co-production aspect of the project has been cited as a key strength and ‘a unique process in this country’ (interview, GWRC-4a, 2016). While an independent review by Māori researchers identified challenges with the modeling process (Robb and Harmsworth, 2016), that review acknowledges the positive spirit of the initiative, and the Collaborative Modelling Project has been positively evaluated by council staff as well as other researchers (Dingfelder, 2016). The Collaborative Modelling Project has required an enormous investment: \$1.6M for the Ruamāhanga, and 1.2M for the Porirua Whaituas, by one estimate (interview, GWRC-4a, 2016).

Council bricoleurs included a cohort of operational staff, managers, and politicians. Despite a lack of acute environmental pressure and political crisis in the region, these actors assembled a compelling and successful case for an expensive, involved, and radically novel process of collaborative planning based on citizen-representation and supported by a sophisticated modeling exercise oriented toward meaningful synthesis of mātauranga Māori and western science. Bricoleurs drew on their experiences of the Land and Water Forum, regional politics, their knowledge of Canterbury’s process, and expertise on collaborative governance, to craft a comprehensive and proactive planning exercise. Specific bricoleurs contributed to designing structure of the collaborative groups, organizing and facilitating the collaborative process,

designing the Collaborative Modelling Project, and writing plan recommendations, all the while maintaining political and bureaucratic support and guarding the integrity of the process from criticism by antagonistic actors.

4.5.2 Waikato – collaboration as legitimizing the Vision and Strategy

Unlike Wellington, the Waikato region has a national profile for industry-environmental conflict, and its approach to the NPSFM needs to be understood within its environmental, institutional and co-governance contexts. The Waikato region has historically had the highest number of livestock in the country, and has been described as Ground Zero for the dairy boom of the 1990s (see Chapter 2). Because porous volcanic soils tend to leak nutrients easily, the environmental effects of intensive dairying have become an acute national concern, and the health of the Waikato River (the country's largest river) has featured prominently in national conversations about freshwater (e.g., Corlett, 2016). Over half the region is used for pastoral farming, over a quarter for native forest and vegetation, with the rest used for plantation forestry (15%), horticulture, urban and other uses (MfE, 2017g).

In the 2000s, the fifth Labour government's climate policy instigated another major round of land use conversion to dairy. Around the time the Emissions Trading Scheme was set up in 2008 to manage fossil fuel emissions, 'about 22,000 hectares of forests were cut down because people didn't want to have to pay that penalty in the first commitment period' (interview, WRC-4a, 2017). Subsequently, when the fifth National government opened the domestic emissions market to international trade, the carbon price dropped, leading to further land use conversion which 'caused another 23,000 hectares of clearance in the upper Waikato' (interview, WRC-4a, 2017).

Unlike the voluntary Crown-iwi arrangements in Wellington, the governance of the Waikato River (i.e. most of the region's waterways) is now formally structured by a legal settlement between the Crown and the iwi Waikato-Tainui. The Waikato-Tainui Raupatu Claims

(Waikato River) Settlement Act 2010 created the Waikato River Authority, a co-governance entity consisting of five Crown appointees and five iwi appointees, who are charged with writing and enacting the Vision and Strategy for the Waikato River. That Vision states:

Our vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come. (Waikato River Authority, 2011: 4)

The Vision and Strategy document has legal power that supersedes the NPSFM, meaning that all planning rules created under the NPSFM must be consistent with the Vision and Strategy. The document describes 13 objectives including the restoration of the river, the recognition that the river should not be required to absorb further degradation, and the protection of key cultural and ecological values of the ecosystem. The Settlement Act compels Waikato Regional Council to incorporate the Vision and Strategy into its regional plans (including freshwater plans) and give effect to its objectives and strategies, without the possibility of standard legal appeals.

When the 2011 NPSFM was enacted, Waikato Regional Council thus had a pre-existing source of 'local and national values' for the Waikato River; 13 objectives were listed in the Vision and Strategy. The council could have chosen to implement the Vision and Strategy document (and easily comply with the NPSFM) *without* further community engagement. However, several council staff argued that the council should undertake a collaborative freshwater planning process as a way to update multiple rules across the plan, to do something big and inclusive for water quality, as well as to socialize (and legitimize) the new co-governance arrangements with landowners and stakeholders (interview, WRC-4b, 2017). Two staff were cited as instrumental in i) convincing managers to adopt a collaborative approach, ii) assembling networks (including an Australian researcher) to advise upon and structure the approach,

and iii) undertaking a multi-year commitment to following the process through and maintaining support across political and bureaucratic levels.

Waikato Regional Council staff worked with the Waikato River Authority to develop a structure and process for community planning, driven by a Community Stakeholder Group and supported by technical advisors. The Collaborative Stakeholder Group were drawn from sectors (e.g., environment, iwi, forestry, dairy) whose relative proportions were voted upon in an initial public meeting. Proportions were subsequently amended by council staff to correct for an over-representation of agricultural interests. Whereas other regions used collaborative groups to decide objectives for freshwater (e.g. the desired level of freshwater quality), the Collaborative Stakeholder Group was to decide how specifically to achieve the objectives contained within the Vision and Strategy. According to staff, this arrangement ‘took a lot of the uncertainty and debate out of it’ (interview, WRC-4a, 2017), which made the task easier for technical advisors as well as participants. The Collaborative Stakeholder Group began work in 2014 and made its recommendations in 2016 (outcomes to be determined) for the Waikato and Waipa Rivers, with plans to initiate plan changes for other catchments into the future.

Like Wellington, the Waikato Regional Council chose to undertake a long, expensive, and intensive collaborative process to implement the NPSFM. Even though the NPSFM does not require councils to use collaboration, and even though the Waikato River is now governed by clear Settlement legislation which provides ‘local values’ required for NPSFM implementation, key bricoleurs assembled political and expert coalitions to stabilise and legitimate a collaborative approach. This contingency is brought further into focus when considering that the idea of the Collaborative Stakeholder Group was not widely supported within the bureaucracy and by politicians. The Collaborative Stakeholder Group survived by a single vote in the regional council in its middle phase, and the previous executive leadership within the council was not supportive of sharing decision making with community.

4.5.3 Hawkes Bay – collaboration versus antagonism

While the use of collaboration in Waikato offered a way to build council-community relations within a new co-governance regime, in Hawkes Bay the use of a collaborative group emerged within a context of high-profile environmental conflict. The Hawkes Bay region is relatively warm and hilly, with variable rainfall feeding a few large rivers and aquifers. Nearly half of the Hawkes Bay area is used for pastoral farming (mainly sheep and beef with some dairy and deer), a third is native vegetation, followed by exotic forestry (12%), horticulture, other uses, and small urban centers (MfE, 2017d). In terms of water quality, this land use profile, coupled with relatively warm temperatures, has generated recent blooms of cyanobacteria that have gained national headlines for killing animals, including pet dogs (Hawkes Bay Today, 2016). In August 2016, the small town of Havelock North was struck by a gastroenteritis outbreak, caused by contamination of local groundwater by the bacteria *Campylobacter*, later found to be sourced from sheep feces (Fowler, 2017). Over 5000 people became violently ill from drinking contaminated water, and three deaths have been linked to the outbreak.

Recent conflict has also erupted with public outrage over water bottling plants (Hendery, 2015), and deep community divisions were formed over the proposal to build the Ruataniwha dam to store water for irrigation. Since 2014, the Ruataniwha Water Storage Scheme proposal for the Tukituki River has been subject to court battles and public debate between environmental and agricultural groups, with the Hawkes Bay Regional Council publicly supporting the dam. In 2017 Aljazeera aired a two-part documentary about the Ruataniwha dam conflict, presenting evidence of Ministerial interference into the Department of Conservation to silence internal dissent about the dam (see Aljazeera, 2017). When the Supreme Court ruled that the Ruataniwha dam could not be built because it flooded conservation land, the fifth National government promised to change the law to allow a spatial offsetting of the flooded area (Davison, 2017). After the 2016 regional election changed

the composition of council support for the dam, and after the Supreme Court decision was announced, the council withdrew support for the dam and scrapped the proposal. From the NPSFM 2011 through till 2017 the Hawkes Bay Regional Council supported the dam, and the council has been viewed by many in the community as developmentalist.

By the late 2000s, regional council staff had identified ‘some thorny issues in a couple of our catchments’ (interview, HBRC-4a, 2016) and decided to pursue a rolling approach to amending their resource management plan, focussing on specific catchments at a time, beginning with the Tukituki River. The Tukituki River plan change was informed by a community liaison group that council called together in 2008 and had nearly finished by 2011. When the NPSFM 2011 and 2014 came out, the Tukituki recommendations had to be amended to include new attributes to comply with the policy. After the Tukituki, council staff grouped together four catchments – the Tutaekuri, Ahuriri, Ngaruroro, and Karamu (TANK) – because they share a groundwater aquifer and they all had resource consents expiring in the next few years. A collaborative process was proposed and led by a key veteran staff of council, who drew on professional relationships with environmental researchers to design the process. At a time when the idea of ‘collaborative planning... was gaining attraction across the country’, the TANK process offered a way to get people ‘around the table hearing each other’s perspectives’ in a politically-charged context (interview, HBRC-4a, 2016).

The TANK process began in 2012 and included ~30 residents, with the council seeking representation across a range of sectors. An explicit decision was made early on that only local residents would be invited; no national organizations. Participants were informally shoulder-tapped for invitation to TANK, based on who council staff thought ‘had a contribution to make and had particular interests to be expressed’ (interview, Consultant 4a, 2016), attempting to ensure that major interests affected were involved or at least invited. While the council sought advice from Ngāti Kahungunu (the iwi authority recognized by the Crown in settlement proceedings), it also invited Māori participants from local marae

(community centre), which became a matter of concern as some official representatives felt their status was undermined (see also Sinner and Harmsworth, 2015). Just as TANK was starting in 2012, the council was setting up its Regional Planning Committee, which consisted of nine councillors and nine iwi appointees tasked with overseeing the planning process. TANK did not work closely with this committee; TANK champions cite this as a major regret. The politics of TANK was further tangled by the fact that environmental groups were also historically untrusting of the council, especially since the Ruataniwha dam conflict, and churn within those stakeholders led to uneven participation and political buy-in to the process. Within Hawkes Bay Regional Council, TANK was largely driven by one enthusiastic staffer without significant support from management, until a new deputy chief executive (a well-respected former MfE manager) arrived in 2016 and personally championed the process. The TANK process published a brochure in 2017 (Hawkes Bay Regional Council, 2017), and will recommend draft planning rules in 2018. Once TANK is completed, the council will move on to the Mohaka catchment using a more consultative (rather than collaborative) approach, and it remains unclear whether council will support another intensive collaborative process into the future.

Like Wellington and Waikato, the collaborative approach taken was proposed, designed, facilitated, and sustained by a small cohort of staff as a positive platform to engage local community while also implementing the NPSFM. This cohort struggled against an ungenerous bureaucracy and an elected council unwilling to share decision making power with the TANK group (prior to 2016). The key staffer was stretched so thin in terms of time, resourcing, and expertise, it is not surprising that the design of TANK drew on personal networks and shoulder-tapping to compose the TANK group, rather than create a costly open and public process of participant selection. It is also unsurprising that in the rush to compose a working TANK process with very little political and bureaucratic capital to spend, that the bricoleurs unintentionally neglected to create a role for the Regional Planning Committee to oversee and legitimate the work of TANK. The bricoleurs here were not without options,

however: forging a partnership with a research project (the Freshwater Values, Monitoring, and Outcomes program discussed in Chapter 1), the TANK process was supported by bi-annual forums in which Hawkes Bay staffers could troubleshoot issues and seek advice from researchers and other councils.

While the 2011 NPSFM was enacted before TANK began, the 2014 and 2017 revisions to the NPSFM have added significant strain on the already-strained process. The National Objectives Framework introduced in the 2014 NPSFM required the TANK group (and the Tukituki group before it) to revisit and revise their ecological objectives and rules to fit with the nine measured attributes required by the National Objectives Framework. Further, because the Hawkes Bay region is uniquely warm, and since historical deforestation has cleared shading from rivers, the region's rivers are particularly vulnerable to periphyton and sedimentation (interview, HBRC-4b, 2016). The council is unlikely to meet periphyton bottom lines set by the 2014 NPSFM because of the biophysical characteristics of the region, rather than the contemporary intensity of land use.

4.5.4 Northland – constrained collaboration in ‘priority’ catchments

In contrast to the well-resourced councils above, Northland Regional Council is one of the least-resourced councils in New Zealand. This makes its use of collaboration all the more interesting. The Northland region's economy and ratings base is small, it has only one major urban centre (Whangarei), and median income is lowest in the country (MfE, 2017f, and Table 13). Consequently, the Northland Regional Council has little financial resourcing for its activities and must stretch these resources across the whole region. The Northland region consists of mainly rolling hill country, with hundreds of short, low-gradient rivers, and fine soils with relatively poor productivity. Its land use profile is similar to Hawkes Bay, though without the wealth: about 46% of the region is pasture, 32% native forest, 14% exotic forestry and the rest a mix of horticulture, urban, and other uses (MfE, 2017f). The region has

hundreds of lakes, including more than 400 shallow dune lakes with high ecological significance.

Around 30% of the population identifies as Māori, over double the national average of 14% in 2013 (Table 13). The region has seven major iwi, including Ngā Puhi (the largest iwi in New Zealand) which is currently undergoing a settlement process with the Crown. Despite the demographic significance of Māori in Northland, the elected council is ‘very white/conservative’, contributing to a sense that Northland Regional Council is an illegitimate authority that is antagonistic to Māori interests (interview, NRC-4a, 2016). In 2014 the council set up the Te Tai Tokerau Māori Advisory Committee, which includes over two dozen permanent members from selected iwi/hapū in the region, and is led by four councillors. The Advisory Committee is a voluntary working group and members do not have voting rights. When the Committee was formed in 2014, Ngā Puhi representatives criticized the initiative as an attempt to short-circuit the iwi authority in the region (Laird, 2014).

In the late 2000s, the Northland Regional Council undertook a review of its Regional Policy Statement. While there were no major environmental crises spurring this process, there were many ‘low-hanging fruit’ for improving regulation, including tightening controls on sediment and stock exclusion, and adding water allocation limits (interview, NRC-4a, 2016). When the NPSFM was enacted in 2011,

Everybody was talking about collaborative processes, and we weren’t quite sure what water quality limits meant at that point... So we thought, “Let’s identify some catchments, and we’ll do a collaborative catchment process for these areas. Rather than us identify the issues and the solutions, let’s work with the community to do that.” (interview, NRC-4a, 2016)

Given the limited resources available, a key regional council bricoleur (and enabling manager) worked with staff from the land management team to develop a proposal for

collaborative processes for five ‘priority’ catchments: the Mangere, Waitangi, Whangarei Harbour, Pouto Peninsula, and Doubtless Bay. Council bricoleurs argued that each of these catchments had some sort scalable co-benefit value: the Mangere had the worst water quality, Whangarei and Doubtless had acute wastewater issues, Waitangi was near full allocation, and Pouto had significant lakes. Recommendations from these catchments were framed as potentially scalable to the whole regional plan, which was important given that the council could not afford to run collaborative processes for its many small catchments.

Two staff were central in designing and driving these collaborative processes, for which they drew on Waikato and Hawkes Bay’s processes for terms of reference. They used discussion forums (including the Freshwater Values, Monitoring, and Outcomes research program) for occasional advice. Council staff expressed a strong desire to involve tangata whenua (local Māori) and sought representatives from selected iwi and hapū, as well as representatives from ‘the usual suspects’ (e.g., forestry, dairy farming, conservation; interviews, NRC-4a, NRC-4b, 2016). While noting many challenges in the process – including a tendency to err on the side of voluntary action over regulation – all five catchment groups arrived at recommendations for place-based plan provisions that would override the regional defaults.

The NPSFM also required the setting of freshwater management units and developing monitoring infrastructure for the 2014 NPSFM bottom lines. Unlike other regions, Northland set freshwater management units based on environment classes rather than as contiguous areas. Separate water quality objectives were specified for lowland versus hill country, and these applied across the entire region (with the localised exceptions of the five collaborative areas). Council staff note their approach to freshwater management units might be seen as ‘simple’ (interview, NRC-4c, 2016) or ‘crude’ (interview, NRC-4a, 2016) by external observers, but they insist that ‘we’ve interpreted the NPS to fit Northland’s context’ (interview, NRC-4b, 2016). Echoing Hawkes Bay’s concerns, Northland Regional Council staff felt that the 2014 NPSFM bottom lines were ‘not remotely helpful at all’ as they direct

resources away from place-based investigations of cause-effect and toward compliance with national standards (interview, NRC-4d, 2016). Science staff also noted that the 2014 NPSFM bottom lines are more permissive than the international guidelines that Northland Regional Council had used previously.

4.5.5 Auckland – collaboration with community or integration across council?

Of the five regions studied, Auckland is the only one to not explicitly employ collaboration as an engagement mechanism. Auckland Council's approach needs to be situated within the context of its changing organizational structure, and conflicting ideas about what it means to implement the NPSFM within an urban context.

Only 11% of the Auckland region is classified as urban. Nearly half the region is farmland, a quarter is native vegetation, and the remainder is exotic forestry and other uses (MfE, 2017c). That said, most of the region's 1.5M inhabitants live near and work in the city, and much of the regions' investments and politics are driven by urban development concerns. Auckland has the fastest growing population of all regions (Burrows, 2017), contributes 37% of New Zealand's Gross Domestic Product (Statistics New Zealand, 2017b) and has the highest economic growth of all regions (Gibson, 2017). Within the urban context, land development, fecal contamination, sediment, and heavy metal runoff are the most acute environmental pressures.

In 2009, the fifth National government passed the Local Government (Auckland Council) Act, which amalgamated Auckland Regional Council with seven district and city councils into a single entity called Auckland Council. Proponents contended that amalgamation would simplify the relationships between the Council and council-controlled organizations Auckland Transport and Watercare, to enable better coordinated and more efficient provision of infrastructure. Amalgamation was also justified by government as reducing bureaucracy, streamlining service provision, and enabling growth, although these claims were fiercely

contested (see McFarlane et al., 2015, for a review of debates). The resulting Auckland Council immediately produced a new Regional Policy Statement to provide an integrative vision for the region, which was published in 2012. The Regional Policy Statement emphasised the strategic economic and demographic significance of Auckland to the country, and formally declared Auckland's aspiration to become 'the world's most livable city' (see McArthur, 2017). It took another year to notify Auckland's Unitary Plan (which provides detailed rules to achieve the objectives of the Regional Policy Statement), and after 3 years of submissions, hearings, and court processes, the Unitary Plan became operative (in part) in November 2016.

The logic of the NPSFM within Auckland Council needs to be understood within multiple waves of institutional change in this context. The amalgamation forced a merger between environmental regulators (the precursor Auckland Regional Council) and those subject to regulations (city and district councils). When the NPSFM was enacted in 2011, a team of environmental specialists from former Auckland Regional Council took on the NPSFM as a planning project, and forged lines of funding and accountability to the second highest tier of the bureaucracy. For five years, work was done scoping approaches to organizing freshwater management units around each of Auckland's three major harbours (Kaipara, Waitematā, Manukau), with an intention to undertake a collaborative process with community for each harbour to identify values and then embed these into the Unitary Plan through a plan change. According to observers, this approach created 'a lot of animosity within the council' as the implications of new freshwater rules for other council teams and organizations (such as wastewater infrastructure) would be massive, and yet the proposed NPSFM planning process 'hadn't been developed in collaboration with them' (Consultant 4a, 2016). Meanwhile, the stormwater unit within the operational arm of Auckland Council had been building momentum for water-sensitive urban design across the council, and contributed constructively to the Unitary Plan process, adding rules and methods that would ultimately align with the NPSFM (Consultant 4a, 2016).

In 2014, the NPSFM team manager left and Auckland Council underwent an internal restructuring, leaving the NPSFM team with fewer staff, altered lines of accountability, and a strong push to deliver immediate outputs. When a new manager was appointed in 2015, an independent consultant was contracted to evaluate the NPSFM program, and that review, based on interviews with staff across council, was sharply critical of the previous five years of work. It observed ‘a complete lack of horizontal integration’ of the NPSFM implementation across Auckland Council and proposed that the responsibility for NPSFM implementation be shifted to the stormwater team in the operational arm of council (interview, AC-4a, 2016). The stormwater team already had built many links across council and its related organizations, and had contributed constructively to the Unitary Plan in a way that helped Auckland Council demonstrate compliance with the NPSFM.

In 2016, responsibility for the NPSFM was shifted to the newly rebranded Wai Ora-Healthy Waters Department (which included the stormwater team, and two members of the strategy team). The Healthy Waters Department were tasked with integrating the implementation of the NPSFM across council operations. The objective of NPSFM implementation was reconceptualised as improving freshwater quality rather than writing limits through a distinct planning process. As one staff put it, ‘instead of being a regulator, we needed to be an influencer’ (interview, AC-4b, 2016). Rather than focussing on a plan change (at a time when the Unitary Plan was still being litigated), the focus would shift toward working with other council and non-council organizations to prioritize and embed water-sensitive practices into their operations. As of August 2016, the new team’s strategy was to divide the region into 10 catchments, focussed on shared marine receiving environments, and to develop a broad engagement strategy – but not collaboration *per se* – to solicit peoples’ aspirations and values for the environment. Scientists within Wai Ora-Healthy Waters have been developing models to estimate the effects and costs of different development scenarios on shared marine environments. The team also created a new marine recreational monitoring program – Safe Swim – which provides a site- and situation-specific assessment of marine water quality, to

encourage and facilitate recreation activities. Due to this flux of staffing and responsibilities within Auckland Council, MfE (2017c) reports that iwi and stakeholders are unclear about the council's implementation program. While council staff have indicated an explicit commitment to involve iwi and engage the wider community throughout, the intended mechanisms of formal participation have not been decided or communicated.

The approach taken by Auckland Council has been shaped heavily by several bricoleurs. Initially, a cohort of staff from the strategy arm of council took on the NPSFM, built a line of accountability to the second tier of council, and secured funding for their work on values and engagement. One of their preferred options was to conduct collaborative processes and associated plan changes for each of Auckland's three major harbours, though this posed a threat to other teams and organizations related to Auckland Council who felt excluded from this decision making process. From 2015, the new manager of strategy contracted a consultant, undertook a critical review of work, and shifted the entire work program to the consolidated Healthy Waters Department who had achieved better 'horizontal integration' in their work on the Unitary Plan, and had existing working relationships of pertinence to infrastructure improvements. Here, the role of the manager and consultant have been pivotal in shifting the entire NPSFM approach from a separate collaboration-plus-plan-change approach toward an approach focussed on mainstreaming water-sensitive urban design across many organizations and aspects of council's operations.

4.6 Policy bricoleurs and the contingent pursuit of local objectives

4.6.1 Revisiting the top-down view

My accounts of the five regions are drastically simplified, told each as stories with protagonists struggling in historical contexts to secure institutional support and pursue a range of local objectives that include but also exceed freshwater management. The accounts give visibility and coherence to the local purposes of policy implementation, in contrast to MfE's review which breaks down each region's implementation activities into lines on a

spreadsheet and 11 national themes (see MfE, 2017e). At the end of MfE's regional reports, officials provide a summative evaluation of the regional council's implementation program. Table 14 synthesizes these for the five regions examined in this chapter. In many ways, MfE's findings can be interpreted as consistent with my accounts above.

Hill and Hupe argue that top-down implementation research often assumes that policies are coherent and self-evident, causing analysts to 'blame the implementers' (2014: 165) when expected outcomes are not realized. Consider, for example, that MfE's report characterises Hawkes Bay Regional Council's staff and TANK members as 'naïve' when they went into the TANK process, as if all costs and outcomes were knowable (if not known) in advance (MfE, 2017d: 15). When the introduction of the National Objectives Framework in 2014 added major costs and complexity to the Hawkes Bay collaborative process, MfE writes itself out of responsibility for this new burden, stating that 'HBRC found this challenging to manage' (MfE, 2017d: 12). From this use of language, it appears that MfE's top-down Review is invested in portraying the NPSFM as a coherent, self-evident, and a relatively low-cost policy that regional councils should be expected to implement without complaint or difficulty.

Table 14. Author’s synthesis of conclusions from MfE’s assessment of five regional councils’ NPSFM implementation programs (drawn from MfE, 2017c, 2017d, 2017f, 2017g, 2017h).

Council	Doing well	Challenges to address
Northland Regional Council	<ul style="list-style-type: none"> • Has made significant progress, requirements could be satisfied before 2025 • Pragmatic approach makes effective use of resources • Collaborative approach focused on priority catchments 	<ul style="list-style-type: none"> • Proposed plan is highly permissive and likely to lead to ecological deterioration • Participation in collaborative groups is uneven and unevenly resourced • Iwi experienced a strong negative feeling from council – council may fail NPSFM provisions to work with iwi and hapū • Council capability and resources stretched by NPSFM implementation • Information needs for large area and small resource base
Auckland Council	<ul style="list-style-type: none"> • A lot of effort has been undertaken toward improving freshwater outcomes • Some NPSFM planning provisions have been incorporated in the Plan • Progress has been made in gathering baseline information for limit-setting • Council has sufficient capacity and capability for implementation 	<ul style="list-style-type: none"> • Stakeholders uncertain about what is or should be happening regarding the NPSFM • To meet the requirements of the NPSFM the council needs community input and needs to involve iwi and hapū
Waikato Regional Council	<ul style="list-style-type: none"> • Appears well-placed to complete implementation by 2025 • Has addressed most challenging catchments first 	<ul style="list-style-type: none"> • Significant involvement of community has incurred considerable costs, and future efforts should try to reduce this cost • Some involved in the collaborative process have threatened to break from consensus and litigate the Plan change

	<ul style="list-style-type: none"> • Plan changes prior to the NPSFM will support improved freshwater outcomes • Exemplary effort toward engaging effectively with iwi, sectors, and the wider community through its Healthy Rivers – Wai Ora project • Stakeholders cite a trusting relationship with council • Overarching Vision and Strategy has provided structure and clarity to the process 	<ul style="list-style-type: none"> • Council needs to work more with Auckland Council to plan for shared resources
Hawkes Bay Regional Council	<ul style="list-style-type: none"> • Has a strategy to implement NPSFM within appropriate timeframe • Members of TANK collaborative process seem very engaged • Council plans to treat TANK recommendations on good faith • Positive relationships with territorial authorities • Considerable improvement in relationships with iwi/hapū 	<ul style="list-style-type: none"> • Participants from national organizations have threatened to litigate outcomes from collaborative process • TANK group needs to support policy with implementation plan • Relationships with iwi/hapū could be strengthened by building council capacity and supporting iwi/hapū involvement through resourcing
Greater Wellington Regional Council	<ul style="list-style-type: none"> • High level of political support for NPSFM • Community engagement is highly collaborative • Engaging well with iwi • Well-resourced • Collaborative modeling project a good development 	<ul style="list-style-type: none"> • Involve wider community participation • Improve communication of technical information • Program is complex and ambitious • Nested planning approach will be challenging

By not embedding its evaluation within the lived experiences and institutional contexts of council staff, the MfE Review implicitly locates responsibility for perceived negative outcomes with regional councils, rather than fraught financial and political conditions (Northland), unique physical geographies and historical conflicts (Hawkes Bay), or multiple waves of institutional change and realignment, themselves caused in significant part by central government (Auckland). In contrast to the top-down perspective, a bottom-up view illuminates how creative local bricoleurs are interpreting unique political and institutional terrain and have attempted to assemble willing (if fragile) coalitions of bureaucrats, politicians, and external experts to trial new collaborative planning practices and strengthen co-governance with Māori. Before conducting a more generous interpretation of the top-down view, three distinct contributions of a bottom-up view can be identified; these are discussed below.

4.6.2 The local logics of policy implementation: identifying and valuing local objectives

Examining local implementation programs offers insight how national policy requirements are repurposed by local government bricoleurs to secure locally valued objectives within the politics of the possible (Blanco et al., 2014). The prominence of collaboration across all cases illustrates the diversity of local objectives being sought in different regions, as well as the situated means used and challenges faced by bricoleurs as they attempt to achieve them.

While ‘collaboration’ per se was never required nor mentioned in the NPSFM, four regions (all except Auckland) undertook costly collaborative processes with community groups to understand and articulate local community values for waterways. Collaborative approaches were championed by key staff within councils, who in turn faced significant resistance from the bureaucracy (resourcing, expertise, labour) and elected politicians. These staff constructed locally-specific arguments for undertaking collaborative planning processes that both implemented requirements of the NPSFM while also resolving significant local problems,

changing organizational structures, and promoting more inclusive and interactive forms of council engagement with community. The use of collaborative processes in Hawkes Bay and Northland were as much about re/building public trust in the regional council as they were about implementing the NPSFM. In Waikato, collaboration was used to decide how to achieve the freshwater objectives laid out in the Vision and Strategy, rather than to decide upon freshwater objectives from scratch. In doing so, this process was intended to foster community ownership of new planning rules, and legitimize the new co-governance regime. In Wellington, collaboration was used as a pre-emptive way of reducing conflict in the planning process, enacting proactive and voluntary co-governance arrangement with the Māori resource management committee, and setting nationwide precedent for integrating mātauranga Māori and western science in resource management. In Auckland collaboration per se was rejected in favour of a more strategic and brokering style of engagement to mainstream water-sensitive design thinking across council departments, and to build monitoring infrastructure to raise public awareness of water quality issues.

Despite these diverse logics of collaboration, MfE's Review summarises practical challenges of collaboration across all councils in a similar way. The Review offers practical advice about representation, funding, decision making structures, group dynamics, and having explicit terms of reference for a group. While such advice is undoubtedly valuable, without a detailed place-based analysis of the purposes and constraints of collaboration such a framing effectively treats collaboration as a context-free technique whose parameters can be easily changed. To complement this view, the bottom-up analysis attempted here clarifies how councils are pursuing specific local and often incremental objectives within highly constrained local political and institutional settings. This recognition could inform a more nuanced approach to evaluating policy implementation. For instance, consideration could be given to how collaborative processes are augmenting specific relationships (within council, between council-iwi, between council-community) against likely local implementation alternatives.

4.6.3 Dismantling the assumption of frictionless implementation: bricoleurs operating in constrained and uncertain conditions

Top-down analyses of policy tend to assume that policy requirements can be met in practice by implementers, when in reality implementing agencies face constrained resources and multiple competing policy priorities (Hupe et al., 2014). Top-down analyses such as MfE's Review can (unintentionally) assume that all regional councils can meet all requirements of the NPSFM within specified dates and that any failure of compliance is the result of incompetent (rather than structurally constrained) councils and their water policy staff. This can lead to the erroneous evaluation of 'success' in specific places based on contingent elements that are not available in all places. While MfE's Review praises Waikato's collaborative process, that process was not strongly supported by senior executives and politicians within Waikato council, it survived on a single vote in its middle stages, and it ended the political career of its key political champion. The similarly-praised Greater Wellington Regional Council owed its approach to unique individuals who were part of the Land and Water Forum and who became champions for a collaborative approach. In Hawkes Bay, the TANK process relied heavily on a single staff champion and their researcher collaborators to provide an air of authority to the collaborative process, despite not having the support of the upper echelons of either the council or the bureaucracy. If 'success' can be judged as conformity with MfE's 'planning with community' model of collaboration (MfE, 2013a: 28), then successful efforts have been i) unique in form owing to the personalities involved, ii) incredibly hard fought for and personally costly, and iii) very unlikely to happen without extra-NPSFM enabling conditions.

While MfE praises Wellington's collaborative approach, few if any other regions have the same combination of low conflict, somewhat positive relations between council and iwi/hapū, supportive council leadership, and a solid funding base. The Auckland case makes this point even more clearly. Auckland Council initially had a group of staff who had planned an MfE or

Land and Water Forum-style collaborative process. However, these staff pursued this approach without the buy-in of key organizations within Auckland Council, and this led to agitation and the reallocation of the NPSFM to the stormwater team. Here, the rollout of an MfE-style version of collaboration threatened powerful actors within the council, and as a consequence that approach, as well as the team who championed it, were curtailed. What emerged was an operational approach that prioritizes relationship-building for integrating water management concerns across the council's many organization, seeking to mainstream water concerns rather than use a separate regulatory process to force radical reforms.

By dismantling the assumption of implementation success, we get a better sense of how change happens within state organizations. Policy implementation is less a mechanical process of translation and more a process of bricolage – a creative process combining limited pre-existing elements. Implementation happens through people whose qualities, resources, and relationships indelibly shape what their programs look like and whether or not they can procure wider organizational support and investment. Across the five regions, regional council staffers have played key roles in i) surveying their local political landscape, ii) emphasising certain policy requirements of the NPSFM, iii) connecting these policy requirements to the solution of local problems, and iv) procuring resources and building networks to design and undertake implementation programs (see also Blanco et al., 2014). In this way, council staff have acted as bricoleurs, assembling existing elements into the construction of novel social forms (Levi-Strauss, 1962). Sometimes bricoleurs had many favorable elements within their grasp, such as a progressive, supportive, and well-resourced regional council combined with low levels of environmental conflict and reasonably positive relationships with iwi (Wellington). More often bricoleurs assemble fragile and strategic coalitions around projects (e.g. Auckland's failed collaboration approach), and they can even make decisions that in hindsight appear to be mistakes (e.g., TANK not working with the Māori-council co-governance committee in Hawkes Bay). Understanding policy implementation as bricolage draws attention to the number and quality of elements available

to bricoleurs (e.g. financial resources, political and bureaucratic support, pre-existing conflict), their strategies for assembling these elements together, and whether and how they achieve local as well as national objectives. Dismantling ‘success’ from the top-down perspective means re-understanding local capabilities as uneven and contingent in both their magnitude and qualities. The evaluative question then shifts from asking whether local practices meet national policy requirements toward asking what elements existed within reach of bricoleurs.

4.6.4 Can policy achieve its outcomes? Evaluating assumptions of policy design

When the imagined outcomes of policy fail to materialize in the real world, ‘policy formers... are inclined to see the objectives of the policy involved as clearly stated’, leading to a tendency to ‘blame the implementers’ and pursue stricter controls of implementers’ actions (Hill and Hupe 2014: 165). This is evident in the increasing detail and expanding requirements of the NPSFM through its evolution from 2011 (11 pages) to 2014 (33 pages) and 2017 (47 pages, see also discussion of expanding content of the NPSFM in Chapter 2). Against this tendency to blame the implementers, however, another view is possible. In their monograph *Implementation*, Pressman and Wildavsky propose that policy should be understood as ‘a hypothesis containing initial conditions and predicted consequences’ ([1973] 1984: xxii). By this logic, failure may result from policymakers’ incomplete grasp of the initial conditions and/or an incorrect prediction of results from policy requirements. The bottom-up view allows us to test the hypothesis of policy by critically evaluating two assumptions about its predicted consequences.

One unspoken assumption embedded in the top-down perspective is that any undesirable effects of implementing the NPSFM are manageable, negligible, or necessary. If the primarily desired outcome from NPSFM implementation is maintenance or improvement of freshwater quality, it needs to be asked whether its provisions enable or constrain the achievement of this outcome. The NPSFM – especially through the Nation Objectives Framework added in

2014 – is placing enormous resourcing burdens upon councils, and servicing these policy requirements requires trade-offs from other council priorities (including freshwater monitoring, policy making, and enforcement). The 2014 NPSFM forces regions to set limits for nine biophysical attributes irrespective of whether those attributes constitute acute biophysical pressures on ecosystems, and irrespective of whether they are meaningful attributes to measure for a particular waterbody. In Hawkes Bay, for instance, councils are required to set limits for nitrogen, even though the most acute regional pressures are related to sediment and phosphorous, and Northland cites sediment and *E. Coli* as theirs. The NPSFM also added costly requirements for monitoring infrastructure: ‘we need 18 monitoring sites that do all of the things which Wellington [central government] tell us we need to do, and that may or may not be a good idea, from our perspective’ (interview, HBRC-4b, 2016). For instance, a dissolved oxygen monitor costs around \$8000, and to implement the 2014 NPSFM one must be purchased (or reallocated) to all 18 required sites (see also MfE, 2017d: 21). To purchase a bundled, multiple-use sensor costs around \$20,000-\$30,000, and to then add telemetry to monitoring instruments (to enable transmission of data over distance) would cost another \$20,000-\$30,000. Further, the proliferation of mandatory attributes required by each successive NPSFM has added costs and frustrated the work of collaborative groups. When the 2014 NPSFM was enacted, the Hawkes Bay TANK process was two years into objective-setting for waterbodies. The TANK group had to then revise all of its work to date to address the new attributes (MfE, 2017d). A bottom-up perspective prompts us to ask: are these costs negligible, manageable, or necessary for maintaining or improving water quality?

A second assumption embedded in the top-down view is that the NPSFM contains the power to realize its own objective, namely, for freshwater quality to be *maintained or improved* (New Zealand Government 2017: 5). The experiences of Auckland and Waikato demonstrate that the NPSFM may not be able to regulate some of the most significant drivers of environmental change. In Waikato, we saw that the greenhouse gas Emissions Trading Scheme led to over 40,000 hectares of land use conversion from forestry to pastoral uses

(interview, WRC-4a, 2017), which contributed to significant increases in nitrogen pollution (Vant, 2013). While the 2011 NPSFM clarifies that discharges from such conversions must now be explicitly consented by councils, this example highlights that regional councils have a limited ability to affect the wider political economy of land use or even regulate all relevant aspects of polluting land uses. Consider that while the 2011 NPSFM requires that water quality be maintained or improved, the Ministry of Primary Industries in 2012 promised to double agricultural exports by 2025, and the 2016 National Policy Statement on Urban Development Capacity requires urban land to be freed up for development, while making no mention of how freshwater impacts ought to be mitigated in this process. In urban contexts such as Auckland, the council has limited levers with which to affect land use. Mainly this is achieved through issuing resource consents, undertaking public works, and constructing and maintaining infrastructure (Consultant 4a, 2016). Unlike rural land uses such as pastoral farming, urban structures and developments cannot have their environmental footprints changed without fundamental redevelopment. Council can improve freshwater outcomes through tightening consent conditions for future development, looking for opportunities to green infrastructure, and undertaking public works, all of which Auckland Council is doing, yet staff feel that ‘even just maintaining status quo is a success for Auckland’ (interview, AC-4c, 2016).

4.6.5 The need for both top-down and bottom up perspectives

While a bottom-up analysis is useful for identifying the local purposes, contingent forms, and actual effects of policy implementation, top-down analysis is needed to hold local governments accountable to the national public interest. Not all geographical variation in implementation is bad for the national public interest, but it is not all good either. A bottom-up view can become trapped within the logic of the local, valuing local objectives (such as systems of patronage with industries, see Kirk et al., 2017) over national objectives and avoiding radical or costly changes in practice. Consider, for example, that while Northland

Regional Council undertook five parallel collaborative processes – a huge achievement for such a small council – MfE argues that the water quality limits in its draft plan were not guaranteeing sufficient ecological protection (MfE, 2017f). While Northland’s approach and outcome may have been the ‘best’ achievable outcome for council bricoleurs within their unique political and institutional environment, it may not be sufficient from wider public interest perspective. A key role for MfE could then be to evaluate the specific planning rules that result from NPSFM implementation against the objective of maintaining or improving water quality.

Regional council bricoleurs may also not be able to significantly affect the direction and outcomes of their council’s implementation programs because of larger structural conditions, especially the priorities of elected councillors and the mindsets and power struggles within the council bureaucracy. Regional councils do have internal bureaucratic and political cultures that can ignore or subvert valid national objective such as ecological sustainability and co-governance with Māori. The fact that there are progressive bricoleurs within councils does not mean that these bricoleurs are powerful or without constraining influences. Indeed, the five cases explored here show that bricoleurs trying to democratise environmental planning face many and sometimes insurmountable hurdles of institutional inertia. The ‘hypothesis’ of policy involves certain assumptions about what the barriers to desired outcomes are, and that policy contains the relevant levers to overcome them. A bottom-up perspective can test the policy hypothesis and in so doing broadening consideration about what is driving, enabling, and resisting organizational changes that can enhance local democracy, indigenous empowerment, and ecological sustainability.

Although I have focussed on council bricoleurs who have championed the normative ideals of local environmental democracy, there are shades of grey in bricoleurs’ views, as well as other contestable values that bricoleurs and other council staff hold. As the Auckland case clearly illustrates, council staff can be divided into ideological and social factions who compete to

secure different visions of organizational progress. When the NPSFM ‘lands’ into a regional council, it can be struggled over by organizational factions, and be repurposed in ways unforeseen by the writers of policy. Bricoleurs are creative and strategic actors, but like all humans can behave in ideological or self-interested ways that are not in the public interest. Ensuring that local planning does not become captured by specific economic and interest factions remains a key function for national policy.

4.7 Conclusion

Does space make a difference to the implementation of national environmental policy? From the evidence presented in this chapter, I argue that yes, space does matter, though it has not been determining in each instance. The regions of New Zealand have distinct biophysical environments, indigenous politics, funding contexts, institutional arrangements, and political factions, and the number and qualities of these elements all shape what types of implementation have been able to secure organizational support. Northland could not have afforded to undertake a Wellington-style Whaitua process with millions of dollars spent on collaborative modeling, for example, and Hawkes Bay was for various reasons channeled into using a collaborative process for the TANK catchments. While these territorial elements clearly mattered, they do not have linear or mechanical effects on implementation outcomes. Northland’s limited funding context did not prevent them from undertaking five parallel collaborative processes, nor did Auckland Council’s size and large funding base mean that it will undertake a Land and Water style collaborative process for its three harbours.

Rather, if place matters in policy implementation, it is largely because ‘place’ is made to matter by embedded bricoleurs. Across all five cases, bricoleurs were pivotal in championing the use of collaborative processes (or moving away from them, as in Auckland). This is particularly interesting given that collaboration was not required by the NPSFM. This reveals that bricoleurs – policy champions within implementing agencies – have been core drivers of the shape of NPSFM implementation. Thus, while space makes a difference to policy

implementation, it is because humans construct spatial difference in ways that support their proposals for implementation. To return to the concept of the institutional void, then, it is clear that regional implementing agencies do not face the same interpretive landscape, which might suggest the notion of 'regional institutional voids'. However, the key insight of this chapter is that such a regional institutional void should not be thought of as a set of fixed and objective geographical elements; rather, the regional institutional void refers to the relational contexts and capacities of regional bricoleurs. Some bricoleurs face deeply entrenched hierarchical cultures, while others face a council seeking to be proactive with iwi in the resource management space. Some are responding to conflict, whereas others can pre-empt it. While all contexts are different, similarity in implementation pathways is possible depending on how bricoleurs can assemble similar elements (such as collaboration) into viable proposals to address place-based organizational problems.

This chapter has also explored some of the merits and limitations of bottom-up and top-down analyses of policy implementation across space. Both bottom-up and top-down views of implementation are valuable and indeed necessary for reflexive governance for sustainability. Bottom-up analysis such as that attempted here can help to i) identify locally objectives related to national policy that affect the structure of local policy responses, ii) identify the local conditions that constrain and prioritize organizational actions, and in so doing suggest policy responses or local political strategies, iii) identify the (often unexpected) trade-offs that are involved in meeting national policy requirements, iv) evaluate the ability of the policy requirements to achieve the policy intent, given new knowledge about implementation in practice.

On the other hand, while it is important to understand how implementation is experienced, it remains important to identify whether implementation is achieving the national public interest as embedded within the policy intent. Top-down analysis of policy implementation is needed to evaluate the outcomes against some ideal standard, whether the subsequent

response from central government is discipline or support. While I have focussed on characterizing the collaborative turn in freshwater management in New Zealand, I have not conducted an evaluation of ecological implications of the planning rules resulting from these collaborative processes. Such an evaluation can and should be undertaken, although care needs to be taken when interpreting the relevance of specific biophysical indicators to specific regions. When top-down analysis is undertaken, however, it should not evaluate the legitimacy of local variation in implementation without also reflexively questioning the appropriateness of and possible improvement to the design of national policies.

Chapter 5 - Shaping policy implementation from outside the state?

Spatial strategies of translocal intermediaries

5.1 Introduction

Non-state actors such as consultants, lobbyists, researchers, and non-governmental organizations play increasingly important roles in designing and undertaking policy implementation (Moss et al., 2009; Edelenbos et al., 2013). When a policy is enacted and implementing actors must to make sense of new policy concepts, they often enlist the aid of experts to advise upon and/or design their implementation programs. As local authorities must integrate multiple and often competing objectives from national policies, often they hire non-state experts to help them design implementation programs that effectively link national requirements to local objectives and organizational priorities (Medd and Marvin, 2008). The roles these experts play can be distinguished from civil society (the general public) as well as from stakeholders, whose preferences are generally understood to be formally political and hence require input through a formal and equitable process of deliberation. Expert intermediaries, by contrast, can influence the logic of policy implementation without being seen as a vested interest. By referring to their technical expertise or knowledge of the law, for example, experts can exert influence 'above' the rest of society. Hajer (2003b) argues that non-state experts can attempt to shape the institutional void by leveraging their technical expertise to 'negotiate new institutional rules, develop new norms of appropriate behavior and devise new conceptions of legitimate political intervention' (p175-6).

If non-state experts can influence the nature of environmental policy implementation and alter its distributive implications, then it is urgent to understand the nature of these experts' influence in decentralized environmental governance. The rising influence of non-state experts in the policy process has been observed in the domain of water governance (Moss et al., 2009) and environmental governance more broadly (Turnhout et al., 2013; van Enst et al.,

2017). While previous scholarship has identified some broad functions of environmental experts and parsed out their different worldviews, doing so has also stepped outside the specific policy debates and implementation practices in which experts operate. To understand the politics of these experts, I argue, we must consider how experts argue about and seek to influence policy actions with a specific policy setting. Only through such a detailed examination can begin we evaluate how these experts are transforming environmental democracy. Are non-state experts significantly influencing the shape of specific policy implementation programs? If so, how do they attempt to secure this influence, what strategies do they use?

The decentralized implementation of a recent freshwater policy in New Zealand provides a window through which to examine how non-state experts are attempting to steer local policy implementation activities. The National Policy Statement for Freshwater Management (NPSFM) requires New Zealand's 16 regional councils to set water quality and quantity limits for all waterbodies in their jurisdictions by 2025 (New Zealand Government, 2017). The NPSFM introduced several new concepts such as 'limits' and 'local and national values' (see Chapter 2) – which have been left open for local interpretation. As regional councils have proceeded to make sense of these new policy concepts, many policy professionals from outside the state – such as consultants, lawyers, researchers, scientists – have affected how councils interpret these concepts and translate them into local implementation programs.

In this chapter I examine how a specific type of non-state experts – which I label intermediaries – are attempting to shape the regime of water policy implementation in New Zealand. I argue that intermediaries engage in political activism by employing a suite of rhetorical strategies to persuade implementing agencies to undertake specific preferred implementation activities. Intermediaries 'attempt to affect others' views of reality' (Alasuutari and Qadir, 2014: 67) and channelize the institutional void of policy interpretation to favor specific interests and ways conceiving the environmental problem. While decisions

about implementation details are often framed as technical debates that should supersede or ‘sit above’ formal democratic politics, I contend that the work of these experts is in fact deeply political and as such merits further empirical analysis and political critique.

In the next section, I review the character and roles of intermediaries in environmental policy; who they are, what they do, and how they do it (Section 5.2). After briefly outlining my evidence base and methods (Section 5.3), I recast the history of New Zealand water governance to highlight the specific qualities and tactics of translocal intermediaries (i.e. intermediaries who work across multiple regions, Section 5.4). I describe the emergence of Overseer®, a prominent intermediary-produced biophysical model that has been influential in structuring how policy actors think about water quality limits. I examine how Overseer® frames the ‘problem’ of freshwater limits, and how it has been advocated and contested by different intermediaries (Section 5.5). I then introduce ‘Good Management Practice’ as an alternative regulatory approach advocated by industry, and I outline two other domains in which intermediaries have sought to codify knowledge to shape implementation: understanding Māori values, and collaboration (Section 5.6). In addition to championing policy models and best practices, intermediaries draw selective lessons from other regions, to support their advocacy for specific policy approaches (Section 5.7). In the penultimate section I develop four arguments about intermediaries that link across the policy mobilities and environmental intermediaries literatures (Section 5.8). In the conclusion, I advocate for an increased analytical focus on non-state experts and their role in environmental politics.

5.2 Intermediaries, models, and policy mobilities

Inquiring into the political strategies of non-state actors requires a narrowing of focus. ‘Non-state actors’ encompasses all actors in civil society who are not embedded within the state. To sharpen my empirical and analytical focus, different categories of non-state actors can be distinguished:

- The public – civil society actors who shape public discourse and make political demands upon the state.
- Stakeholders – citizens whose preferences are considered as one of many competing interests, and whose input must be channeled through formal democratic processes in which the state weighs up the equal preferences of different stakeholders.
- Intermediaries – professional policy experts who advise/debate local and central state agencies regarding the design and implementation of regulation from a technical perspective.

In this chapter, I focus on this last category, intermediaries. In contrast to ‘the public’ or ‘stakeholder organizations’, intermediaries enjoy an added level of influence in decision making as their expertise focuses on the procedures and techniques of policy implementation. While stakeholders and the public are understood as having value interests that must be formally weighed up in policy making processes, intermediaries can plead for changes in policy based on their professed neutral expertise.

Intermediaries can be embedded within stakeholder organizations, in the case of fulltime lobbyists, for example. However, intermediaries do not always need to be formal stakeholders. A research scientist or policy guru, for example, can offer advice on what counts as a sensible regulation – or what is consistent with the law – without being treated as a stakeholder whose interests must be formally weighed against others in a democratic process. Intermediaries can thus claim to represent organizations or some wider sense of the public interest. Who they represent is less important to me than how their activities shape policy implementation. My focus is on how intermediaries engage in politics, whether they represent a private actor or not. I define intermediaries by the work they do to shape policy implementation.

National (or international) environmental policies often lack direct operational applicability for implementing agencies, and can conflict with other policies that agencies are required to

implement (Edelenbos et al., 2013; Zuidema, 2017). Use of intermediaries has increased across the industrialised West as local governments attempt to understand and integrate their new responsibilities under environmental decentralization. Intermediaries can be understood as technically-proficient professionals who work alongside state, private, and civil society groups to translate national environmental policies into practical programs of action (see Medd and Marvin, 2008; Moss et al., 2009). Intermediaries typically include consultancies, researchers, non-profit agencies, lobbyists and brokers for various community interests. Intermediaries work with other policy actors – such as local governments, infrastructure providers, or those affected by regulations – to translate what are often ambiguous policy requirements into their clients’ organizational goals and practices. Intermediaries work to structure dialogue between policy actors (such as stakeholders in a regional environmental planning process), align interests around a project, and translate multiple scales and domains of regulation into a program of action in service of a specific group or set of objectives (Moss et al., 2009). Intermediaries can be hired as contractors or consultants, but they can also be embedded within an organization, or work for ‘the public interest’. Industry lobbyists, for example, are often permanently-hired intermediaries who work for a specific organization to interpret policy requirements for that organization, as well as lobby to alter those requirements in both the policy making and implementation process.

Since there is more than one way for an intermediary to conduct their translation work, intermediaries should not be considered politically neutral. Moss et al. emphasize that intermediaries are ‘highly selective in the issues they support and the activities they perform, [and are] not able or not willing to contemplate aspects deemed peripheral to their interest’ (2009: 30). While Moss et al. (2009) acknowledge that intermediaries’ have their own interests, they stop short of providing empirical examples of the mechanisms through which intermediaries express or secure their interests.

How might policy intermediaries attempt to shape the form and content of policy implementation? To address this lacuna, recent geographical scholarship on urban policy mobilities is instructive. McCann (2011) has examined how consultants and researchers can act as ‘policy boosters’ by promoting their definition of the policy problem to local authorities. These policy models selectively include and exclude certain political concerns, and can be modified to align with local organizational priorities and narratives (Peck and Theodore, 2010; Temenos and McCann, 2013). This scholarship emphasizes how policy translations provided by intermediaries will involve selective representations of the policy problem – or components of the problem – and these selections will legitimize certain political concerns. Analyzing the inclusions and exclusions of these policy models (or policy elements), and the means through which they circulate, offers one plausible mechanism through which intermediaries distill their professional, political, and even personal values into local conceptions of the policy problem.

In addition to the policy models that intermediaries promote, a second type of strategy for affecting policy interpretations in the form of lesson-drawing or inter-referencing. Here, intermediaries construct stories about what happened in other places as a way of shifting policy debates within a local setting into desired directions (Robinson, 2015). Intermediaries carry with them certain stories, values, ideas, or policy elements, which affect how they perceive and respond to their local policy problem (Larner and Laurie, 2010). Inter-referencing is also about positioning one’s situation against a broader field of policy success and constraints, for instance along a spectrum of resourcing, political possibility, or capability (see also Bunnell, 2013; Peck and Theodore, 2015).

While policy models and inter-referencing may shape local implementation to some degree, these activities – and indeed all local and national policy activities - are subject to broader ideological and political economic fields of power. Geographers have emphasized that even experimental or radical policy improvisations take place within conditions of ‘constrained

proliferation' (Peck and Theodore, 2015: 231). While multiple local interpretations of a national policy might be possible, all interpretations are not equally feasible, and some may be ideologically anointed by powerful interests (Peck and Theodore, 2010). In this way, the prospective influence of intermediaries is constrained by the power relations and ideological conditions of the local context in question.

Few scholars since Moss et al. (2009) have examined the nature of environmental intermediaries, their structured activities, and their effects on local policy implementation. There have been empirical studies of knowledge brokers (Turnhout et al., 2013; van Enst et al., 2017), as well as studies of non-governmental organizations (Davidson and de Loë, 2016), for example. Interviews with knowledge brokers have shown that these intermediaries broadly see their roles as settling conflicting interests between stakeholders and making use of scientific knowledge, and that to achieve these goals requiring 'on stage' work of policy framing coupled with 'back stage' work in which informal conversations are created and subtly steered (van Enst et al., 2017). While generalized insights about intermediaries are valuable, we still need to identify *specifically* how intermediaries are affecting local policy implementation, if we are to evaluate whether or not the work of intermediaries is desirable from a public interest perspective.

By bringing the literatures of policy mobilities and intermediaries together, I hope to add value to each. To the literatures on intermediaries, this chapter will contribute an analysis of the *specific mechanisms* (rather than the general activities) that intermediaries use to structure policy implementation practices. To support me in this task, policy mobilities provides valuable tools to identify, unpack, critique, and engage with the work of water policy intermediaries. To the policy mobilities literature, this chapter provides case study of environmental (rather than urban) policy, and one which steps back from a single policy to consider the wider regime of intermediaries and how they affect the interpretation of a policy across multiple locations. Where the policy mobilities literature has tended to focus on the

movement of policy between two or more jurisdictions, this chapter considers how multiple intermediaries engage across multiple sites in relation to the same policy. This allows me to consider the multiple regions and strategies of the intermediary as a political actor, rather than focussing only on a region or two.

5.3 Methods and materials

My aim in this chapter is to provide an empirical account of the work of translocal intermediaries in New Zealand water policy, to theorise this work, and consider how a deeper understanding of the work of intermediaries might affect how we think about environmental politics. To construct an empirical account of intermediaries' work, I draw primarily from policy documents and semi-structured interviews with 11 intermediaries, supported by interviews with local and central government actors.

Drawing on my knowledge of the New Zealand water policy space, and through a process of snowballing recommendations from government officials and familiar intermediaries, I sought interviewees with a wealth of experience and at least some diversity of interests. Excluding the four members of parliament with whom I spoke, I interviewed 11 individuals currently employed as non-state intermediaries. At least three of these have at some point worked within local or central government, and many government interviewees (not included in the 11) have previously worked as intermediaries. For present purposes these 11 interviewees can be described as: three consultants, three policy researchers, one industry representative, three environmental organization representatives, and a member of the Land and Water Forum secretariat. Two were female, nine were male. All have spent most of their careers within the New Zealand water policy sector, and most are lifelong New Zealanders.

My selection of 11 intermediaries is not intended to be representative of major interests in New Zealand freshwater politics. Rather, it is a snowballed sample that is heavily weighted towards environmental and research-based intermediaries. This snowballed sample is rich

with experience across regions and across time, but notably does not include Māori intermediaries, and includes only one industry intermediary. Nor does it include intermediaries from horticulture, tourism, infrastructure, and other interests that might be important for New Zealand freshwater politics. My objective is to explore the political strategies and activities of these intermediaries; how they operate and how they achieve influence. It is plausible that the strategies of intermediaries might be related to the 'client' or interest being represented. Linking the strategies of intermediaries to their purported interests would be a valuable next step for research on intermediaries in New Zealand and elsewhere, but the present study is explicitly exploratory.

Any account of the New Zealand resource management system must be selective, and mine is no exception. My task is to characterize how the translocal dynamics of water policy work. My focus is on investigating the political strategies and practices used to affect water policy implementation outcomes in multiple places. My intent is to provide an account of *how* (some) translocal intermediaries structure policy implementation, to assess whether and in what ways this structuring influence is worthy of research and political analysis.

5.4 Water policy intermediaries in New Zealand

The qualities and activities of water policy intermediaries in New Zealand are significantly shaped by the historical circumstances that gave rise to them and the legal structures that create continuing demand for their services. Here I revisit relevant aspects of the history of freshwater regulation in New Zealand, drawing attention to the translocal work of policy intermediaries.

The Resource Management Act 1991 (RMA) constituted an important new structure through which environmental decision making would play out across New Zealand. The RMA's sustainable development principles were to be given effect by regional councils as they wrote and administered regional policy statements and plans (henceforth plans). Regional plans

would be publicly notified by councils and proceed through public hearings and soliciting public submissions. After plans were finalised, many actors and organizations – usually industry, environmental organizations, and iwi – can appeal to the courts, arguing that plans do not adequately reflect the legal principles enshrined in the RMA (see Chapter 2). Environment Court hearings would adjudicate the matter, based on evidence of the environmental, economic, and cultural costs and benefits of a proposed plan or specific resource consent.

The production of first-generation plans (and associated resource consents) during the 1990s generated a community of resource management professionals who were proficient in environmental law and planning, and who had become experts at making arguments of legal interpretation and evidence. These planners, lawyers, lobbyists, and scientists were often based in councils or in stakeholder organizations (e.g. environmental NGOs, industry, iwi), though many were consultants contracted by stakeholders or councils. These experts were hired by councils and stakeholder organizations to challenge or defend regional plans in Environment Court, to argue that water management rules in these plans either did or did not adequately give effect to the purpose of the RMA. While the RMA was intended to enable substantive public participation through public hearings and submissions processes, in practice the ultimate decisions about plans and consents were made through a ‘technocratist legal formalism’ dominated by the courts and paid experts (Jackson and Dixon, 2007: 107).

Veteran intermediaries recall that through the 1990s, regional councils behaved like ‘fiefdoms’ and ‘kingdoms unto themselves’ (MfE official 5a, 2016), developing their own plans and rules in isolation and not learning from what other councils were doing. ‘We had a degree of wheel reinvention going on, where people had to learn the hard way [about] the resource management issues arising from water management’ (MfE official 5a, 2016). From the 1990s to the 2000s, these intermediaries accumulated knowledge about New Zealand’s

resource management system and travelled across the country, appealing and defending plans and consent decisions in Environment Court and beyond. In the case of national-scale stakeholders such as Federated Farmers or Forest and Bird, often the same experts would fly across the country to litigate each other in different regional contexts in the hopes of securing desired environmental, economic and cultural objectives within those regional plans. These experts often then shared stories about different regions, developing receptive audiences for their tales of regulatory successes and failure. One can look to the conferences and activities of Resource Management Law Association, the NZ Planning Institute, the NZ Hydrological Society, the NZ Freshwater Sciences Society, the NZ Agricultural and Resource Economics Society, and the Environmental Defence Society as exemplary venues of interaction for these intermediaries, as they consolidated lessons learned about ‘what works, where’. It was in these conferences, the courts, and various workshops practical settings in which accepted wisdom in water management was constructed.

Starting in the early 2000s, several important developments took place. First, regional councils and MfE began to host regular forums where knowledge and experiences from the different regions could be shared. Regional councils and MfE initiated forums for chief executives, one for policy managers, and Special Interest Groups for technical topics (such as groundwater science). By meeting twice (or more) a year, council staff could learn from each other directly and circulate stories of success and failure. Second, environmental organizations and agricultural representatives recognized that they ‘were wasting an awful lot of time and energy and effort and resources... fighting the same issues at every regional plan’ (interview, K. Hackwell, 2017), and after the ‘dirty dairying’ campaign of 2003 they sought platforms outside of the courts where parties could work through disagreements (see Chapter 2). Third, the emergence of the Land and Water Forum in 2008-9 marks a critical threshold for this progression, as intermediaries effectively banded together to develop a common agenda to influence government policy making about water (see Chapter 2). For environmental groups and Māori, a key aim was to embed baseline rights and/or

environmental conditions that would be guaranteed across New Zealand, and which could not be easily appealed by regional litigation. For industry groups, a key aim was to embed a generic form of industry-specific regulation that would not be too costly to implement, and which would allow confidence for planning and economic investments.

When the National Policy Statement on Freshwater Management (NPSFM) was first gazetted in 2011, there was by now a well-established system for circulating ideas about how to implement its requirements. Intermediaries had prominent roles within the Land and Water Forum, and the Forum's recommendations can be read as a broad distillation of what was learnt (and frustrations) based on decades of experience with the RMA (see also Turnbull Group, 2009). The 2011 NPSFM required councils to set freshwater quality and quantity limits based on local and national values (see Chapter 2), but since these concepts were not rigidly circumscribed, this presented regional councils, central government, and intermediaries with an 'institutional void' (Hajer, 2003b) into which they had to develop new norms and ways of doing things. In the same way that the purpose of the RMA in 1991 had to be developed through actual planning processes and case law, the acceptable bounds of interpretation for implementing the NPSFM were also being shaped by court processes, legal arguments, and stories about other places.

While the 2011 NPSFM embedded key concepts such as limits, values, collaboration, and rights and interests into freshwater policy, these concepts already had some form due to their histories and existing communities of meaning-making (see Chapter 2). Water quality limits provides a clear example of this. A water quantity or quality 'limit' instituted by the 2011 NPSFM was defined as 'the maximum amount of resource use available, which allows a freshwater objective to be met' (New Zealand Government, 2011: 5). While the 'maximum amount of resource use available' might make intuitive sense for conceptualizing the volume of water extracted from a river, the concept is less translatable to water quality. How does one quantify the amount of water quality 'available'? As explained by an MfE official, 'the

policy intent was that you would allocate back to land, because that's how you are actually going to manage [water]' (MfE official 5b, 2016). Allocating 'back to land' here means designating each land parcel with a specific amount of permissible pollution. In this ideal, setting limits for water quality involves stating measurable water quality objectives and then apportioning specific responsibilities to upstream land uses to achieve the desired state. For example, to reach a desired instream concentration for *E. coli* would involve apportioning the current *E. coli* levels to specific upstream land uses and assigning responsibility for altering land use practices to achieve those apportionments. Given that *E. coli* comes from multiple sources (e.g. sheep, beef, dairy cattle, human wastewater), and that these sources will have different intensities and physical geographies in relation to a waterbody, such an apportionment exercise rapidly becomes a very challenging task. This task, as it happens, is precisely what the computer-based model Overseer® helped to do.

5.5 Constructing and debating regulatory models: Overseer® and water quality limits

One way in which intermediaries shape the institutional void is through the promotion of pre-crafted policy implementation models. These models are often framed in technical terms. In reality, however, they are political in that they privilege certain interests and they include and exclude certain issues and concerns. In this section I explore how the scientific model Overseer® structures policy implementation by privileging and marginalising certain biophysical and regulatory elements. Unpacking Overseer® is important especially as intermediaries have sought to strategically embed or resist Overseer® in regional planning contexts to secure desired economic or environmental objectives. Understanding the politics of Overseer® provides insight into how intermediaries attempt to influence what counts as a 'legitimate political intervention' (Hajer, 2003b: 176) in the domain of policy implementation.

Here I focus on how water quality 'limits' are being defined and struggled over through the biophysical model Overseer®. Overseer® is a scientific model that has acquired a dominating – albeit contested – influence on how limits are being thought about and practiced in regional

water management. Overseer® has also become a tool that intermediaries use in court settings to secure desired regulatory outcomes. Because Overseer® is designed and administered by scientists based on scientific logics that are not reducible to the ideology of the government in power, Overseer® provides an illustration of how logics and actors ‘beyond the state’ are affecting the implementation of water policy. Overseer® is constructed and used by intermediaries to affect what counts as a legitimate political intervention in a regional plan. While mainstream research on decision-support tools such as Overseer® often treats them as instruments for achieving sustainability (e.g. Rose et al., 2016), my perspective focuses on how decision-support tools have an ideological and distributive aspect. Below, I outline the philosophy of Overseer®, its fundamental assumptions, and how it has been used and contested in the creation of water quality limits. In Section 5.6 I will contrast Overseer’s politics to those of Good Management Practice as a regulatory alternative currently being promoted by agricultural industry. The material differences between these two approaches are substantial, and this draws attention to how decisions about the *means* of environmental regulation are simultaneously decisions about its *ends*.

5.5.1 Overseer®: apportioning water quality obligations to land

Overseer® is a software package developed by New Zealand scientists to model nutrient cycling

through the farm system. Its genesis traces from the early 1980s, when central government made significant investments into the development of fertilizer use guidelines to improve agricultural efficiency and productivity (Watkins and Selbie, 2015). Over the 1990s the underlying science and detail of the model improved and Overseer® was trademarked as an intellectual property. Since the 2000s Overseer® has become widely used in regional environmental planning (Arbuckle, 2015), and in 2016 the ‘non-profit focused company’ Overseer Limited was created ‘to administer the software, in order to ensure the long-term viability of OVERSEER and meet growing user needs’([https://www.overseer.org.nz/about-us-](https://www.overseer.org.nz/about-us)

2). Overseer Limited is owned equally by AgResearch (a Crown Research Institute), the Ministry for Primary Industries, and the Fertilizer Association of New Zealand, an industry organization (ibid.).

Overseer® quantifies the flow of nutrients – such as nitrogen – through the farm system. It requires information on the ‘inputs’ of nutrients, which can include fertilizer, rainfall, and irrigation, among others. It then models the biochemical processes of soils, plants, and animals, to quantify the different ways that nutrients leave the system as ‘outputs’, such as through final produce (e.g. milk), intermediate produce (e.g. hay), or leaching into the ground or water (Watkins and Selbie, 2015; Wheeler, 2016). Recognizing that farm systems are unique and moderated by physical geography, Overseer® requires large amounts of farm- and region-specific environmental data. Information about climate and soil type, fertilizer use, topography, irrigation, crop rotation, stock numbers and breed, effluent management systems, among other types of data, are all used to model the conversion of nutrient inputs to outputs. Overseer® reports include estimates of total annual loss of nitrogen and phosphorous to water, as well as greenhouse gas production, among other topics (Watkins and Selbie, 2015). While Overseer® can model both phosphorous and nitrogen, the biophysical pathways of these nutrients are fundamentally different. Nitrogen enters water through overland flow, through drainage channels, and through groundwater leaching. Phosphorous, by contrast, is usually bound in sediment, and travels mainly across the top of the land into surface water. While the leaching of nitrogen into groundwater can be averaged across space, phosphorous processes are highly spatially specific and are more difficult to model (Watkins and Selbie, 2015; Freeman et al., 2016).

Overseer® was created as a decision support tool intended to help farmers increase agricultural productivity. By helping farmers identify nutrient waste, and by equating nutrient waste with financial waste, use of Overseer® is advertised to help reduce costs. It has been marketed as ‘the smart way to manage nutrients’, promising knowledge that can be

used to increase soil fertility, efficiently distribute nutrients throughout the farm, test different ‘what if’ scenarios, and to ‘understand how much you could be losing to the environment’ (Overseer brochure, 2016). Since fertilizer costs money, reducing nutrient losses is claimed to lead to an increase in the efficiency and profitability of farms (Watkins and Selbie, 2015). A 2015 study estimated the economic value of Overseer® use nationally as \$271M per year (Journeaux, 2015). Overseer® now has a company dedicated to promoting the continued development and widespread uptake of the model. While it is a ‘non-profit focussed company’, the administration and revision of the model is costly, and revenue is required to maintain operations.

5.5.2 Overseer® in freshwater regulation

In the context of the NPSFM’s requirements to set water quality objectives, Overseer® provides a logic for linking water quality outcomes to specific properties and land uses. For example, Overseer® can be used to apportion the existing nitrogen load between farms adjacent to a river, so that when a new desired nitrogen load is decided upon (e.g. through a community collaborative process), Overseer® can then be used to ‘fairly and equitably’ distribute any new regulatory burden across properties (Wheeler, 2016). Conversely, in cases where existing nitrogen loading in rivers has not yet caused ecological collapse, stakeholders have argued that this implies ‘headroom’ for further agricultural intensification or expansion, and Overseer® can be used to distribute this headroom across land uses and properties (Duncan, 2014: 382).

Currently, Overseer® is the only model or method in the country that can quantitatively apportion the different drivers of water quality outcomes in this way. The OECD (2017b) describes it as ‘the best tool available for estimating nitrate leaching losses from the root zone (topsoil) across the diversity and complexity of farming systems in New Zealand.’ For these and other reasons, Overseer® has become widely used in freshwater planning across New Zealand (Freeman et al., 2016). Since the NPSFM was gazetted in 2011, Horizons Regional

Council, Environment Canterbury, and Waikato Regional Council have used Overseer® to determine land use rules for freshwater – albeit in different ways – and four additional councils have used Overseer® in other capacities (Arbuckle, 2015). In the *Freshwater Reform 2013 and Beyond* document, MfE (2013a) suggested that Overseer® could be used as:

- an indicator of trends in a farm’s discharges.
- a trigger for increased support by regional council or sector advisers, to help the farmer find ways to reduce discharge levels.
- a threshold for increased statutory requirements, e.g., if discharges exceed a specified level, farms must submit an audited nutrient management plan or apply for a consent.
- a way of monitoring compliance with a statutory discharge cap, e.g. to ensure allocated nitrogen discharge levels are not exceeded.

While MfE (2013a) acknowledged Overseer® as an ‘increasingly important’ model, it was also quick to qualify its use. It emphasised that ‘stakeholders within the farming sector have not always supported approaches using OVERSEER®, especially when it is used to monitor compliance’, and that ‘It may be some years before systems like OVERSEER® are precise enough to be used as the basis for enforcing quantitative conditions on land use’ (ibid: 49). Despite decades of governmental investment and scientific research, and despite providing a specific way of setting ‘limits’ as defined by the NPSFM, the government seemed to be warning against using Overseer® as a regulatory tool. Why? To answer this, we must look at how Overseer® has been used in the regions.

5.5.3 The spatial politics of Overseer®

The use of Overseer® to set regional planning rules has been fiercely contested. In the early 2000s Overseer’s® modeling results were only accurate to within 25-30%, and as a benchmarking tool it was intended to explore hypothetical scenarios, rather than accurately predict environmental conditions (Watkins and Selbie, 2015). Intermediaries working for

industries have repeatedly highlighted these limitations in court and have had to ‘keep on fighting these arguments up and down the country’ (Federated Farmers representative, 2016). When these arguments have been raised in Court, however, they have largely been dismissed. It is worth recalling in this context that Overseer® was originally produced by the Fertilizer Association of New Zealand, an industry organization. Overseer® has featured in the rural and even national news regularly over the past five years (see Table 15) and has become a frequent object of criticism for farmers and agricultural industry lobbyists.

Table 15. A selection of headlines on stories about Overseer® published since 2013.

Date (Y/M/D)	News headlines	Publication
2013/04/12	Overseer review questions arable application	NZ Herald
2014/01/19	Overseer nutrient software becoming essential	Stuff.co.nz
2014/08/15	The conundrum of Overseer	NZ Herald
2014/12/20	Horizons councillor worries about Overseer's 'moving goalposts'	Manawatū Standard
2015/02/11	Just how far can Overseer be trusted?	Stuff.co.nz
2015/02/18	There's a better way for councils to use Overseer	NZ Farmer
2015/08/07	Overseer farming program revamped and funding boosted	Stuff.co.nz
2015/11/07	Operation Overseer: farmers learn to live with new nutrient limits	The Press
2016/01/12	Overseer worth \$271m a year to farming economy	NZ Farmer
2017/01/24	Waikato Regional Council must ask: Is Overseer trustworthy?	Stuff.co.nz
2017/03/23	Soil scientist questions accuracy of Overseer modeling	Stuff.co.nz
2017/03/28	Experience and feedback shows Overseer is supported	NZ Farmer
2017/10/27	Farmers warned not to buy farms unless they obtain its nutrient history	NZ Farmer

5.3.1 Horizons and the ideal of Overseer®

The public profile of Overseer® can be illustrated clearly through the case of Horizons Regional Council (aka Manawatū-Wanganui Regional Council, henceforth Horizons), in which

Overseer® became subject of an intense court battle and made national news headlines. In 2014, after nearly a decade of public submissions, plan amendments, and court processes, Horizons' regional plan – called the One Plan – was finally made operative. The One Plan used Overseer® to allocate nitrogen discharges to farms. When the One Plan was drawn up in the late 2000s, it used Version 5 of Overseer® to calculate a statutory limit for nitrogen loss from farms. These leaching limits were enumerated within the One Plan. In 2012 the Overseer® software was updated to Version 6, and this version included much more conservative estimates of nitrogen leaching. This meant that to achieve the officially enumerated nitrogen limits, farms now had to reduce their fertilizer use by radically higher proportions. Since the One Plan did not specify which version of Overseer® must be used, farmers were required to use Version 6 of Overseer® to meet the official limits. This resulted in many farmers failing to comply with their limits. For example, using Version 5 numbers, a farm leaching on average 28kg/ha/yr of nitrogen could have a target of 22kg/ha/yr in the plan. With Version 6, leaching estimates for the same farm increased to 44kg/ha/yr (owing to the newer scientific estimates), while the target of 22kg/ha/yr remained as enumerated in the One Plan (see Duncan, 2014). Thus, instead of reducing nitrogen discharges by 27%, they were now required to reduce them by 50%. This also meant that instead of only 20% of resource consents (i.e. land use permits, see Chapter 2) needing to be reviewed by Horizons, this number was now 80%, representing a huge administrative burden on Horizons and land users.

After the One Plan became operative in 2014, Horizons took a lax approach to implementing the Version 6 numbers, and reissued most of the reviewed resource consents back to land users without significant new requirements. In late 2016, Fish and Game and the Environmental Defence Society mounted an Environment Court case against Horizons, arguing that Horizons was issuing resource consents without cognisance of its duties under the RMA to justify consenting decisions with reference to environmental effects. Forest and Bird's Kevin Hackwell explained, 'Despite the fact that the Plan says "this is the limit"... their

staff are busy giving resource consent one after the other... And each one individually doesn't maybe take them over the limit, but definitely together they all do' (interview, 2016).

In April 2017, the Environment Court ruled in favour of the applicants, compelling Horizons to enforce the One Plan targets by using the most recent version of Overseer®. While most environmentalists supported the decision, this was not universal. A consultant who worked with Horizons at the time elaborated a different interpretation:

You're not going to get anywhere if you go out to those farms and you go, "Sorry, here's an abatement notice. You have to stop farming because you're not complying with this limit". That's going to rip the economy and the society apart, and what will happen is the whole NPS and the whole limits framework, it'll be shaken from below. And if all these different regions are going, "We can't implement it, you're making it happen too fast, you're making it too hard", that'll shake the foundation all the way to the top. And inevitably the whole limits-based thing will suffer. (Consultant 5a, 2016)

To work as a regulatory tool for freshwater management, Overseer® and its councils need to cultivate trust with the subjects affected by its rules. If Overseer's® results feel arbitrary, or if the councils do not buffer any arbitrary negative effects of using Overseer®, then this decreases the legitimacy of Overseer® and/or of councils. This in turn can risk producing defiant land users as well as staunch opposition to Overseer® in general. The institutions supporting a limits-based regime to freshwater management need to be consensual, yet are currently fragile. Pragmatic environmentalists like the one quoted here think that the Environment Court case and its decision are likely to create antagonisms that will polarize environmental regulation. There is not even a clear 'environmentalist' position regarding the use of Overseer® in regulation; clearly these are not merely technical nuances of opinion.

5.3.2 Research and benchmarking with Overseer®: Waikato examples

A policy model such as Overseer® can be used for more than one thing. With Horizons, intermediaries (lawyers for industry and ENGOs) argued for Overseer® to be used to enforce a statutory cap on nitrogen leaching. However, Overseer® can also be assembled into other configurations.

The experience of Waikato's Collaborative Stakeholder Group and the proposed Plan Change 1 provide two different ways of using Overseer® in the planning process. The Collaborative Stakeholder Group (which operated 2014-16) commissioned an economic analysis of land use using Overseer® to explore land use scenarios that were compatible with the region's Vision and Strategy (see Chapter 4). Here 'the idea was essentially to understand what the costs were in terms of the change and profitability of land use in the catchment, subject to meeting different water quality constraints' (interview, WRC-5a, 2017). A group of researchers led by a university economics professor used Overseer® to model how the water quality objectives required by the Vision and Strategy (i.e. a swimmable and healthy Waikato River) could be met by different combinations of mitigation actions. Though an optimisation process, the model 'will then go through a process of searching through all of the mitigations on all of the different types of farms and find the cheapest options. And it keeps doing that until you meet the water quality target' (interview, WRC-5a, 2017). What this model produced was actually – if unintentionally – quite radical. To maintain water quality in the Waikato River, the overall reduction in profitability would be 'in the order of \$70 million or \$80 million per year for the upper catchment', but crucially, 'you get to the point where the kinds of mitigations that we'd built into the models had sometimes been exhausted [so] there had to be... some afforestation occurring the catchment' (interview, WRC-5a, 2017). This confirmed the conclusion of the Parliamentary Commissioner for the Environment (PCE, 2013) that significant reforestation would be required across the central North Island to halt freshwater ecological degradation. While the Collaborative Stakeholder Group was not compelled to use this economic analysis in their recommendations, the experience shows that Overseer® can be used to identify the

costs of maintaining water quality so that deliberations can address how to share these costs equitably.

As a scientific model that informs policy, Overseer® involves selective prioritizations and exclusions, and these are significant. In 2016 the Collaborative Stakeholder Group made recommendations to Waikato Regional Council, and the council proposed Plan Change 1 to give effect to these recommendations. A consultant who worked for the council described the Plan Change as agriculture-focused, and '80% of the document was about focussing on nitrogen' (Consultant 5b, 2017). This was seen as problematic because:

The more recent science coming out in the past 2 or 3 years has largely said 'it doesn't really matter what you do with nitrogen in the Waikato River, phosphorous is the key thing you need to manage and reduce to improve the quality of the river.' That's not recognized in the plan change, it's not recognized in the tools that are being developed to support the plan change.

When I asked how this could have happened, they elaborated:

There's some very senior freshwater scientists who have been working in the Waikato for decades who for their whole career have been saying that nitrogen is the problem, so there is a personal incentive for them not to change. And there's also, in terms of the scientific organizations... For example AgResearch have developed Overseer which is a nitrogen management tool, and they've spent 20 years, millions of dollars developing that. And for me there's a real disincentive for those guys to turn around at this point in time – that's half a career of saying nitrogen is a problem and you need to manage it – to saying "sorry guys we got that wrong, we need to go and look at phosphorous now". And so I just think the scientific community is quite small and insular, and can be quite resistant to new ideas and change. (Consultant 5b, 2017)

Verburg's (2016) ecological study of Waikato River concluded that trends in algae mass in the Waikato River are improving because of improvements related to phosphorous, despite continuing increases in nitrogen. Since nitrogen dissolves readily and leaches into groundwater as well as over land, spatial averages of nitrogen inputs as provided by Overseer® can provide somewhat reliable estimates of nitrogen discharges. In contrast, phosphorous is significantly affected by farm-scale topography, the proximity of stock to streams, and site-specific mitigations such as stream planting and fencing. Overseer® only models these spatial factors crudely across the entire farm, which means its phosphorous estimates are likely to be less accurate (Watkins and Selbie, 2015). Across New Zealand's intensifying agricultural landscapes and the 'nitrogen bomb' associated with them (Joy, 2015), many more streams are expected to become phosphorous-limited rather than nitrogen-limited, meaning that planning efforts focussed on nitrogen may not improve ecosystem health unless phosphorous is also carefully managed (McDowell et al., 2014). These conflicting views of the Waikato Plan Change process illustrate how a model such as Overseer® may – intentionally or not – lead to an institutional path-dependency in which regulatory efforts are constrained by narrow reading of the environmental problem. The case also shows that the use of scientific models such as Overseer® can be explained in part by the championing of specific individuals with vested interests in the model (and its scientific credibility) rather than a purely objective evaluation of appropriateness of the model for the situation at hand.

5.5.4 Overseer® as a tool for intermediaries

Policy models such as Overseer® are often constructed, circulated, and promoted by intermediaries as mechanisms to shape regional implementation priorities and actions. Overseer® is a scientific-cum-policy model that enjoys a position of influence in conceptualizing and operationalizing water quality 'limits' across New Zealand's regions. Although Overseer® is part owned by the government, it was designed, programmed, and

administered by scientists actors outside the state. Further, the specific use and adaptation of Overseer® in local settings is significantly driven by intermediaries, such as lawyers working for ENGOs and industry organizations, or consultants and researchers who use Overseer® in crafting proposals for plan design. As a policy model, Overseer® provides a significant tool that intermediaries can use in the struggle to shape community and environmental planning.

Our brief investigation of the structure and use of Overseer® can lead us to two conclusions about the politics of Overseer®. First, while nitrogen is an important stressor on freshwater ecosystems, it is not the only stressor. Overseer® may provide an elegant way of implementing the ‘limits’ concept for nitrogen, but at the same time it risks fostering a narrowness of vision, what Elliott (2012) calls ‘selective ignorance’. Like all scientific models, Overseer® privileges certain aspects of the biophysical system to the neglect of others, and the way in which it conceptualises the system does not necessarily translate to other ecological elements (such as phosphorous, or sediment). Second, while Overseer’s® scientific limitations are well-circulated public knowledge, it nevertheless can provide a structure of accountability for the ecological effects of farming (e.g. as with Horizons), and for exploring the in/compatibility of specific regional land use configurations with desired environmental states (e.g. Waikato’s economic analysis). Put differently, it has valuable social and regulatory utility.

5.6 Policy models beyond water quality

The previous section elaborated how Overseer® constitutes a favored model for conceptualizing water quality limits in environmental planning. As Peck and Theodore (2010: 170) observe, the circulation of policy ideas across space ‘will often be associated with the anointment of favored “models”’, which are promoted by coalitions of advocates and followers. In this way, Overseer® provides a prime example of such a model with an associated movement of supporters (and detractors). However, while Overseer® is a prominent scientific model that is shaping freshwater politics in New Zealand, it is far from

the only one. Indeed, when I asked a bureaucrat from Northland Regional Council what scientific models they were using to support freshwater planning, they easily listed a veritable alphabet soup of others (interview, NRC-5a, 2016):

- CLUES – the Catchment Land Use for Environmental Sustainability model maps and assesses effects of land use on water quality and socio-economic indicators, developed by the National Institute of Water and Atmospheric Research (NIWA).
- SedNet – a model to assess land management effects on catchment-scale sediment yield, developed by Manaaki Whenua Landcare Research.
- EFSAP – the Environmental Flows Strategic Assessment Platform evaluates effects of different water use scenarios on ecological health indicators and security of supply, developed by NIWA.

Like Overseer®, such models have emerged from distinct disciplinary communities and organizations. They also embed certain biophysical assumptions and make strategic prioritizations that affect the biophysical and social effects of regulation. But there are also other domains of freshwater policy beyond biophysical science that can be affected by the policy models constructed and circulated by intermediaries.

This section considers the politics of policy models that address the domains of policy implementation beyond water quality science. When I asked the Northland Regional Council bureaucrat what types of non-biophysical policy models or elements they drew on for designing their NPSFM implementation activities, they listed economic analysis, use of central government guidance on ‘collaboration’, and the contracting of a consultant to conduct a cultural assessment of Māori values. These concepts – economic values, collaboration, Māori values – are all invoked by the NPSFM, and require regional councils to operationalize them in some way. As with ‘water quality limits’, intermediaries have also developed tools and policy models to support specific interpretations of these other concepts. Below, I briefly

survey some of these tools to illustrate how intermediaries are promoting favoured policy models to structure the implementation of freshwater policy in other dimensions.

5.6.1 Standardising environmental actions: Good Management Practice as a regulatory philosophy

With Federated Farmers we've got a policy on water quality: do not allocate it [to specific pieces of property]. We're saying use 'reasonable use' tests. So it's getting environmental performance to a certain level, and that there is where we're saying you [need to] get to. (interview, Federated Farmers representative, 2016)

Good Management Practice been increasingly promoted by agricultural industry groups in public and private negotiations with councils, in Environment Court hearings, in and other deliberative forums with local and central governments. Broadly, Good Management Practice (GMP) refers to a specified suite of standardised practices that apply to an industry or land use. For instance, for dairy farming, GMPs might include fencing stock from some/all waterways, riparian planting along streams, or principles guiding irrigation water use. The Clean Streams Accord (see Chapter 2) was an industry-driven GMP initiative which sought compliance across the industry with a set of standard practices (in that case, stock fencing).

GMP approaches can be situated within a family of 'soft' forms of industry self-regulation (Perkins, 2017b). Soft approaches provide a measure of quality throughout the supply chain and can range from voluntary farm plans and agricultural extension efforts (administered by governments or by industry), through to peer pressure and involvement within community collaborative processes (Swaffield, 2014; Swaffield and Winchester, 2016). The first report of the Land and Water Forum promoted the concept of Good Management Practice as 'critical tool for improving water quality and efficiency of use' (LAWF, 2010: x), and by the third report it recommended that 'GMPs should be defined and adopted in all catchments' (LAWF, 2012: 82). In 2013, MfE promised to prioritize the development of sector-specific GMP

toolkits to help identify least-cost ways of meeting freshwater objectives (2013: 49). In 2016, MfE promised to coordinate the development of GMP standards ‘for discharges of contaminants to water for different sectors, climate and soil types’ (MfE, 2016b: 23). Industry organizations are quick to point out that GMP is ‘not *Best*, it’s *Good*’ (Federated Farmers representative, 2016). This interviewee elaborates:

Where is good management practice set? It’s set at what your peers would reasonably expect you to do... That’s your starting point. You will not get everywhere with every catchment around the country if you go to Good Management Practice. Then, we don’t go to *Best* Management Practice, we go to... catchment-specific mitigations. In other words, some of the extra things that you will have to do are only specific to your catchment. (Federated Farmers representative, 2016).

A GMP approach is argued to be administratively simpler and cheaper than an Overseer® approach such as that used by Horizons. Complying with statutory Overseer® limits, for example, might require running that model every two to four years to confirm compliance with planning rules, which could cost to the tune to \$3000-4000 per run for a typical farm. In contrast, a GMP approach could involve the straightforward submission of a Farm Environment Plan to the council indicating place-specific mitigations, which could be audited regularly and with less logistical burden (Federated Farmers representative, 2016).

While GMP is favoured by Federated Farmers for its simplicity, consistency, and certainty of obligation, environmentalists are concerned that the use of GMP does not guarantee a baseline level of environmental protection. As a consultant with experience challenging industry in Environment Court put it, there’s ‘no accountability of land owners for *outcomes*’ (Policy researcher 5a, 2016, emphasis added). GMP approaches prioritize the certainty of land user obligations, which means that if the environmental effects of GMP turn out to be worse than predicted, the environment suffers. In contrast, Overseer® prioritizes the achievement

of environmental effects (e.g. nitrogen leaching into the water), which may require adaptation in light of new knowledge to ensure environmental boundaries are not exceeded.

Recently, intermediaries have attempted to reconcile the two approaches. In Canterbury, councils, independent scientists, and industry groups have sought to overcome this dichotomy by combining using GMP to inform Overseer® modeling. The Matrix of Good Management project developed GMP with industry groups for the Canterbury region, and then used Overseer® to predict nitrogen discharges for the whole region based on farms achieving GMP (Environment Canterbury Regional Council, 2015). This approach is favoured by Federated Farmers (Federated Farmers representative, 2016), but time and future evaluations of the approach are needed to assess its biophysical outcomes.

GMP can be considered a policy approach or model that has significant power in New Zealand freshwater management. Industries and their intermediaries played formative roles in crafting and trialing GMP, writing reports and disseminating success stories, arguing for GMP within regional planning debates, and advocating for central government support for GMP.

5.6.2 Operationalizing Māori ‘rights and interests’ through cultural values assessments

In 2011 the NPSFM required councils to ‘work with iwi and hapū to identify... and... reflect tangata whenua values ... in the management of... freshwater’ (New Zealand Government, 2011: 10). Since the RMA was enacted in 1991, communities of practice emerged to develop tools and frameworks with which to translate Māori interests and values into resource management frameworks. While the NPSFM requirements require councils to identify Māori values and reflect these in plans, how this might be achieved has been left open.

Intermediaries such as lawyers, consultants, and researchers, have produced many studies, project reports, and evaluations to guide councils’ thinking about these requirements. A review by Harmsworth et al. (2016) canvassed a range of cultural values assessment methods

generated by researchers and practitioners, arguing that these should all be considered within the purview of the NPSFM. These methods include:

- Cultural values frameworks
- Cultural mapping and assessment, e.g. using geographic information systems or cultural-environmental flow assessments
- Cultural monitoring projects, which draw attention to which things matter to Māori
- Iwi and hapū management plans, that articulate and enunciate the priorities of tangata whenua

Harmsworth et al. (2016) – who are independent Māori researchers - argue that such tools can ‘provide deeper understanding of Māori values, perspectives, and knowledge systems (mātauranga Māori), which can build bicultural capacity for iwi/hapū, and for central and local government, to improve collaborative processes to reach desired outcomes’ (no pagination). While these tools share a common purpose, their methods are diverse, and they invite different types of participation and information. Cultural monitoring for example, focuses on articulating the eco-cultural meanings of river flows for Māori and developing metrics to estimate changes in the qualities and intensities of these meanings, whereas Iwi Management Plans involve specific formal statements of aspirations for a place (e.g. Thompson-Fawcett et al., 2017). Space prohibits a critical analysis of the different types of Māori cultural assessment tools, but what is important here is that these tools reflect different ways of codifying Māori knowledge and values, and translating these into the terms of Western planning concept and frameworks.

These tools are increasingly being used to bridge indigenous and Western worldviews in the context of environmental planning. As summarized by an MfE official, ‘iwi around the country are taking those tools and molding them to their own particular needs’ (MfE official 5c, 2016). Northland Regional Council, for example, hired a Māori consultant to conduct a cultural values assessment to inform their planning process. A council bureaucrat reported

finding this work ‘very useful’, and they said it altered how council was thinking about freshwater objective-setting (interview, NRC-5a, 2016). Within MfE, efforts are being made to advance these kinds of efforts nationally: ‘how do we get national indicators, Māori indicators? How do we implement this across all the councils and what kind of data do we want and need?... There’s a big overlap going on at the moment between traditional Māori practices and the way the Government works’ (MfE official 5c, 2016).

Despite this flurry of positive expectations, however, challenges abound. As bridges between Te Ao Māori (the Māori worldview) and western planning, cultural values frameworks are intended to be locally adapted and owned if not self-generated, which means they require significant investment (Harmsworth et al., 2016). Choices need to be made about whose tools should be used, which iwi/hapū might be invited to produce or use them, and whether such tools offer a better way for councils to engage with Māori than direct consultation and dialogue. Further, the efficacy of cultural assessment for Māori relies heavily upon the regional councils, who are variable in their resourcing and political support for meaningful co-governance. When councils are willing to meaningfully enact the obligations guaranteed in the Treaty of Waitangi, Māori report positive feelings about the efficacy of tools such as Iwi Management Plans to affect desired outcomes, but when councils are unwilling to work together, this can lead to wasted resources, frustration, and injustice (Thompson-Fawcett et al., 2017). While cultural assessment methods offer a vehicle for decolonizing environmental planning, they can also be co-opted in situations of asymmetrical power relationships, and as such they need to be embedded within a broader commitment to co-governance throughout the decision making hierarchy.

5.6.3 Defining ‘collaboration’ as a democratic imperative

Intermediaries such as researchers and consultants have become influential in shaping the discourse and practice of collaboration. Policy researchers and consultants generate evaluations of collaboration as a method for doing freshwater management, and synthesize

experience from elsewhere and propose guidance in the form of practical steps for councils to follow. Researchers have conducted evaluations of the Environment Canterbury collaborative process (Memon et al., 2012; Sinner et al., 2015) and the Land and Water Forum (Baines and O'Brien, 2012), and other regional collaborative processes (Sinner et al., 2016). Consultants and practice-focussed researchers have also developed criteria for choosing collaboration as a planning pathway (Berkett and Newton, 2015), and produced guidance for councils on setting up and evaluating collaborative processes (e.g. Berkett et al., 2013; Berkett and Sinner, 2013; Cradock-Henry et al., 2013; Cradock-Henry et al., 2017).

The interest in collaboration has also driven demand for consultants with specific skills in facilitation:

Facilitation has become a game in itself, or a job in itself. And there are a lot of people... having a pretty big influence as facilitators, actually.

[For example, a well-regarded facilitator] facilitates to an outcome. Its like he's got the outcome in mind, and he gets people there, which feels like delivery. Man, that's influential! You know, you think a collaborative process is just the outpourings and coming together and synergy of those in the room, well, a facilitator has a really big role in that. (Consultant 5c, 2016)

In addition to providing services to specific councils and generating guidance material, intermediaries circulate ideas through the physical movement of their own bodies. For example, at a national scale, the structure of the Land and Water Forum was influenced by Guy Salmon's experience of the Nordic model of collaborative governance (see Chapter 2). At the local scale, Hawkes Bay Regional Council partnered with social researchers to design and run their limit-setting collaborative process. Drawing on the model of Structured Decision Making developed in the Pacific Northwest (Gregory et al., 2012), these researchers and practitioners laid out a sequence of meetings with stakeholders built around specific

objectives such as the articulation of values, followed by the translation of values into objectives and performance indicators with associated management variables. These variables were then assembled into scenarios which were evaluated and deliberated by the collaborative group (Sinner et al., 2014). Hawkes Bay's experience was in turn spread through networks of intermediaries: through the Regional Council Forums held by a large research program, Northland Regional Council staff became familiar with Hawkes Bay's experience, and chose to emulate key elements of Hawkes' Bay's collaborative process (interview, NRC-5a, 2016).

The experience of ECan (Environment Canterbury, aka Canterbury Regional Council) provides another example. ECan was the first region to undertake collaboration after the Land and Water Forum recommendations, and since ECan was making fast progress under its central-government appointed commissioners (see Chapter 2), the 'ECan model' became a common point of reference for both government officials and intermediaries. Fundamental to this model was inviting 10-20 community members to participate in the creation of plan recommendations, where participants were invited based on interpersonal skills and requested to act as representatives for the whole community, rather than for a specific interest group. While a range of interests were sought to ensure some diversity, this came secondary to skill criteria (e.g. working well with others, having policy knowledge) (see Nissen, 2014). As a veteran researcher put it, 'that became the model for what other councils were then looking to for how they were going to implement the NPS' (Policy researcher 5a, 2016). Wellington used a similar approach to ECan, whereas other regions such as Waikato, Hawkes Bay, and Northland opted for a more 'interest representation' model, where participants were expected to speak on behalf of their interest groups and were formally bound to group decisions. The choice between citizen- vs interest-based models is one way in which collaborative processes can differ, and intermediaries can affect this choice (see Chapter 4). However, while intermediaries (e.g. consultants and researchers) can have

significant influence on shaping councils' understandings of 'collaboration', their advice is not always a listened to. To return to our veteran consultant:

When I read [named regional council's] brief on its process, it just looked like the normal kind of planning speak... "and by the way we'll do this as a collaborative process". Nothing, absolutely nothing in there that suggested to me that they have any awareness of what different route a collaborative process might take them down.

(Consultant 5c, 2016)

While intermediaries can work to define norms and common sense around 'collaboration' by circulating physically to advise different councils and by promoting best practices, their influence is always moderated by context and the specific relations and possibilities in each local setting. As with advocating for GMP, or for the use of cultural values frameworks, defining and realizing 'collaboration' is a struggle. Since the outcomes of these struggles affect the nature of New Zealand's environment and local democracy, it is important to render these practices visible and to interrogate their politics.

5.7 Inter-referencing and lesson-drawing as political strategies

Councils find it very difficult to take risks, they're a very risk-averse kind of organization. If you talk to them about ... a new idea or something like that, they basically want to know that someone else has done it first. And so I suppose that leads them to... follow in particular directions which seem like they've established themselves somewhere else. (Consultant 5c, 2016)

Regional councils tend to behave in risk-averse ways, and look to intermediaries and to pre-validated forms of knowledge as a way of decreasing this risk. Part of the expertise of intermediaries stems from their knowledge of what is happening in different regions, what is happening nationally, and even (though to a lesser extent) what is happening internationally. Intermediaries refer to other places – that is, they inter-reference – to legitimize their

authority as well as their specific proposals for a regional plan or implementation approach. Intermediaries construct stylised accounts of different regions, diagnose those regions' successes and failures, and assemble these diagnoses into prescriptions for action within a regional setting.

A first type of inter-referencing is between regions of New Zealand. The ECan model featured prominently in this respect. ECan is widely seen as ground zero for the realization of the collaborative turn post the Land and Water Forum. It was also ground zero for conversions to dairy farming in the 2000s, and ECan had its elected regional council sacked by legislation and replaced with central government-appointed commissioners (see Chapter 2). For these reasons, ECan has been a 'state of exception' within New Zealand (see Thomas and Bond, 2016), and while its lack of an elected council meant that stories of success/failure were treated as unique, its collaborative approach was widely seen as 'leading-edge' (Policy researcher 5a, 2016). ECan embodied factory-scale collaboration which neatly carved the region into 10 zones with associated Zone Committees. These committees had defined roles for participants, tight timeframes, clear deliverables, transparent lines of accountability, and was supported by a clear plan-writing process. While Greater Wellington Regional Council staff praised the citizen-based aspect of ECan's approach and subsequently used that in their own Whaitua process (see Chapter 4), the Federated Farmers representative evaluated ECan's model negatively in comparison to Waikato, which used an interest-based representation model:

The Waikato Collaborative Stakeholder Group [where] everyone's representing different sectors around the table, to me it's a big step up... *That* is more representative of all the different stakeholders around the table, whereas ours [in Canterbury]... we're community representatives and I don't think it is quite working so well...

[In Waikato] you've actually got a better buy-in to the problems and you get a better buy-in to actually delivering the solutions. Because who's creating the problem... they are more likely to implement it than rather than just someone saying "Oh by the way you're doing such and such, this is the way you're going to fix it". (interview, Federated Farmers representative, 2016)

For intermediaries, the knowledge of specific regions and or hot policy models provides a source of their authority, and they cultivate stylised presentations of this knowledge in the forms of lessons. Developing a vernacular of places and experiences provides a way of abstracting social relations from one unique geographic setting and promoting these relations in another context.

Depending on the identity and audience of the intermediary, they might provide different accounts of the same place. For instance, a team of Māori researchers evaluated how Greater Wellington's Whaitua approach incorporated Māori perspectives through their modeling and collaborative process, and reported critical comments from Māori participants regarding how they felt about the process. The report was intended to foster internal learning within Greater Wellington and MfE, and remains unpublished. In contrast, American researcher Dingfelder (2016) conducted a review from within MfE on co-governance experiences in the Waikato, Wellington, and Gisborne regions, and compared these experiences with indigenous co-governance arrangements in the US. Dingfelder's report praises Waikato and Wellington councils for both making substantive efforts to share power through co-governance arrangements, even though challenges still existed and needed to be worked through. In this way, the 'lesson' emphasising state commitments to co-governance are affirmed as positive and necessary to a broad US and NZ audience, where the negative lessons involving feelings of frustration are de-emphasised. The stories told about places are carefully curated to ensure emphasize certain social relations (e.g. co-governance commitment) over others (e.g. frustrations with collaborative modeling).

In addition to rendering evaluations of the spatial landscape of policy implementation, intermediaries also engage in court processes to define the intent of law and policy. In the case of Horizons, environmental groups sought to legitimate a rigid interpretation of limits based on Overseer® that might become a norm for other councils. In Hawkes Bay in the early 2010s, the iwi Ngāti Kahungungu lodged an appeal of the resource consent (permit) for the Ruataniwha dam. They demanded the Court reject the consent based on the 2011 NPSFM requirement that ‘the overall quality of fresh water within a region is maintained or improved’ (New Zealand Government, 2011: 6). The Court produced a declaration that ‘basically supports the arguments to “maintain and improve everywhere”¹² (interview, policy researcher 5b, 2016). This meant that the restoration of a different river could not be used to offset the degradation of the Tukituki River (on which the dam would be built). Through these and many other court battles over legal terminology, intermediaries affect the baseline of interpretation, cementing certain social relations into established common sense, which can then be used in other regions to argue for specific policy objectives or approaches.

A third type of inter-referencing undertaken by intermediaries involves international ‘reach’ (Allen, 2011), as intermediaries draw on accounts from other nations in support of specific forms of environmental governance. Consider that the collaborative turn and the Land and Water Forum which were brought to New Zealand by Guy Salmon from his knowledge of Scandinavian countries (Chapter 2). As Chapter 3 showed, even MfE has been engaged in efforts to reach across to the European Union and abstract lessons to justify its preferred approach to the NPSFM. Against the fifth National government’s approach to decentralized limit-setting, however, David Parker, then-Labour spokesperson for water and current Minister for the Environment, said:

¹² Ngāti Kahungungu Iwi Inc. v. Hawkes Bay Regional Council; Manawatu-Wanganui Regional Council [2015] NZEnvC 50 (27 March 2015).

I'm with the OECD. The OECD effectively say that in respect of environmental baselines, it should be a science-driven decision, and it should then be enforced by regulation generally (interview, D. Parker, 2016)

The OECD's (2017b) *Environmental Performance Review of New Zealand* critically evaluated the fifth National government's approach to setting permissive environmental standards through the NPSFM, suggesting that instead standards should be set high and strong criteria must be met for exceptions to be granted (see Chapter 3). In relation to Overseer®, international comparisons seem to converge in concluding that the use of models for regulation is novel and risky. A Federated Farmers representative recalls visiting a freshwater professor at California Polytechnic State University, and discussing the use of Overseer® to set nitrogen limits. 'And he was just saying... you'd be laughed out of court in California, so don't do it' (interview, Federated Farmers representative, 2016). Similarly, when MfE managers went on a fact-finding trip to Europe and had discussed how New Zealand was using Overseer® in planning, 'everybody thought they were a bunch of loonies trying to do it through a model' (MfE official 5d, 2016). While international lessons may not be rendered in court or become embedded within legislation, they do circulate informally as stories, as internal memos and reports. Through word of mouth and repetition, they take on common sense.

Finally, the case of Auckland illustrates how cities can also act as sites of international inter-referencing for water policy. In the early 2010s, Auckland Council staff arranged for an external review of Auckland Council's water governance arrangements by three Monash University academics. Their report, entitled *Benchmarking Auckland's stormwater management practices against the Water Sensitive Cities framework*, charted Auckland's place within international metanarrative of cities progressing from a Water Supply City (investing in water supply) through to a utopian Water Sensitive City (investing in water supply, drainage, ecological health, recreation, water recycling) (Ferguson et al., 2014). These

researchers concluded that Auckland aspired only to be a 'Waterways city' (which sat in the middle of the progression), and its activities reflected that of a 'Drained city' categorization (which were less ambitious than a Waterways City). Put simply, Auckland was not aspiring to much, and its actions revealed an even weaker commitment to sustainability than its statements or policies. Auckland Council's chief operating officer Dean Kimpton blocked the public release of the report (Orsman, 2014), and when an unofficial copy of the report was leaked to the media it caused significant controversy. A group of stormwater engineers within the council – some of whom were managers - contracted two engineers from the University of Auckland to write critique 'discrediting' the Melbourne report in public, and without the right of reply for the Melbourne researchers (Consultant 5b, 2017). This caused the chief executive of the Cooperative Research Centre for Water Sensitive Cities at Monash University to write a public letter to Auckland Council, rebuking its inappropriate treatment of the contracted researchers and denying them the right of reply. As summarised by a consultant who had worked with Auckland Council, 'it was a typical council reaction of... "Ok we need to put the fire out, we need to damp it down and make the issue go away"' (Consultant 5b, 2017). Here, international intermediaries placed Auckland within a global view of a march toward water sensitive urban design, and found it sorely lacking in both ambition and practice. The resulting furore shows how intermediaries and their lessons can be – and often are – gatekept and materially channelled by powerful local actors.

5.8 Water policy intermediaries working in and on the world

Previous studies have demonstrated the existence of water policy intermediaries as new actors with important roles in shaping policy implementation (Medd and Marvin, 2008; Moss et al., 2009). This chapter has elaborated some of the mechanisms through which intermediaries can affect the processes and practices of policy implementation. As Alasuutari and Qadir have argued, "actors who aim to be influential in politics attempt to affect others' views of reality" (2014: 67). While intermediaries do not wield the force of law and

regulation, they attempt to influence perception and interpretation. Through the promotion of authoritative legal rulings, policy models, and geographic lessons, intermediaries contribute to generating and stabilising the understanding of freshwater ‘limits’, Māori ‘rights and interests’ and ‘collaboration’. Intermediaries attempt to structure the institutional void of freshwater policy with regulatory tools, concepts, and best practices, to guide the implementation practices of local authorities in ways that serve their often-unspoken agendas. The agendas promoted by intermediaries are organizational, but they are also personal. Intermediaries are often embedded within stakeholder organizations such as iwi, ENGOs, or industry groups, but they are also consultants ‘for hire’ by stakeholder groups, and they can also claim to represent the public interest as independent actors (e.g. freshwater scientists).

While intermediaries may narrate their work as reducing risks for councils and other implementing organizations, their proposals often involve significant changes to organizational cultures and practices. Greater Wellington, Northland, and Hawkes Bay have constituted entirely new collaborative community groups to implement the NPSFM, drawing extensively on the expertise of consultants, researchers, and in-house staff to design and implement their approaches. For Horizons, the use of Overseer® in the One Plan underpinned an entire regulatory regime, and yet Overseer® was created by biophysical and industry scientists outside Horizons, and was based on ecological science. Similarly, the use of Māori cultural assessments in freshwater policy implementation offers significant scope for consultants to make recommendations and to have those recommendations become effective (interview, NRC-5a, 2016).

Previous scholarship has identified some generic functions of intermediaries – facilitating dialogue, sharing information, interest-based advocacy, for example (Moss et al., 2009). However, this has left unaddressed the methods through which intermediaries structure policy implementation specifically to enact their interests. How do intermediaries attempt to

translate their own values into the policy prescriptions they target at local authorities, and are there unintended consequences? Since intermediaries are non-neutral political actors, critical scholarship should not only identify and scrutinise the interests of intermediaries, but also consider the means by which they secure these interests. This section elaborates four broad strategies through which intermediaries attempt to structure the void of water policy implementation.

5.8.1 Intermediaries utilize ‘hard’ and ‘soft’ methods to structure the policy void

Policy mobilities scholarship has usefully drawn attention to methods of persuasion used by policy advocates, such as the promotion of policy models and spatial inter-referencing (Peck and Theodore, 2010; Temenos and McCann, 2013). To that literature, this chapter can add a further distinction between hard and soft strategies of persuasion, which rely on different styles of argumentation.

On the ‘hard’ side, intermediaries seek to definitively apply rigid interpretations of terms, models, and concepts to local contexts. In the case of Horizons, environment organizations sought a court ruling to force the council to use the updated version of Overseer® to enforce the targets that were derived from a more lenient version of the software. Here, intermediaries demanded that the targets set with Overseer® version 5 be given strict (and financially significant) effect, even though compliance with targets had become very costly. On the ‘soft’ side of the spectrum, intermediaries promote ideas and policy models and advocate (but cannot enforce) their uptake in local settings. For example, intermediaries have codified social scientific knowledge about collaboration and Māori value assessments. By providing guidelines, tools, and evaluative criteria, intermediaries can affect how local authorities think about the policy problem and how to address it. These forms of codified knowledge gain their eminence and authority from their practical relevance, reproduction and re-use rather than from the courts or regulation. Some forms of codified knowledge, such as Good Management Practices, are currently ‘soft’ and exist in tacit form and guidance,

though many advocates want to see them become embedded in both local and national settings.

While intermediaries can advocate for the uptake (or rejection) of complete policy models, it is also possible to repurpose popular policy models to achieve different effects. For a farming organization such as Federated Farmers, one strategy could be to resist the use of Overseer®. Another strategy might be to repurpose Overseer® into a different role within the plan. As we saw with Waikato, Overseer® can be used for region-wide cost-benefit analysis without being used to enforce compliance of individual farms with environmental limits. Given previous and ongoing government investment into Overseer®, it might make sense for industry groups to redirect rather than resist the use of Overseer®. This is what Federated Farmers appear to be doing in Canterbury's Matrix of Good Management Project, which employs Overseer® with Good Management Practice to estimate how different specifications of GMP might achieve or exceed region-wide water quality targets.

In addition to a redirection strategy, intermediaries can also decompose policy models into their elements and recombine them with new elements for a specific place. Consultants and council staff working for the Greater Wellington Regional Council found the citizen-based representation aspect of ECan's approach desirable. Intermediaries abstracted this specific aspect of ECan's process and used it to structure Wellington's Whaitua process. This forced Whaitua committee members to make and justify decisions based on the broad interests of the community, thus challenging the presumed and embedded power of industry in environmental planning. While referring to 'the ECan model' allowed Wellington intermediaries to characterise the Whaitua process as low risk to managers and politicians, they were transplanting some of the most radical and controversial elements of the ECan model into their location. Perhaps owing to ECan being run by central government-appointed commissioners, industrial land users have been generally supportive of the ECan collaborative model (Sinner et al., 2015). However, in the different context of Greater

Wellington Regional Council, the citizen-representation mandate has led to the newly-excluded industry groups behaving ‘like a shark circling, and they regularly lob grenades’ (interview, GWRC-4a, 2016; see Chapter 4). Intermediaries and bureaucrats designed Wellington’s Whaitua process by drawing on elements of the ECan model and recomposing those elements within Wellington’s context, which included a left-leaning elected regional council. Put simply, this was not simply the ‘ECan model’ in Wellington, because what constituted the ECan model was a lack of regional democracy. In Canterbury that decision making structure led to a happier agricultural sector, whereas in Wellington the industry is more concerned.

This spatial abstraction and recomposition of policy elements is enabled by the geographical circulations of intermediaries, and occurs both nationally and internationally. Internationally, stories about an American professor or European bureaucrats criticizing the use of a biophysical model to regulate nitrogen have been cited by intermediaries as evidence that New Zealand should not use Overseer®, even though New Zealand has a very different institutional, historical, and environmental context. Hawkes Bay borrowed the structured decision making approach from North America, the Land and Water Forum was modelled from experiences of Guy Salmon in Nordic countries, Northland modeled its collaborative terms of reference from Hawkes Bay, and Auckland stormwater policies were benchmarked globally by Melbourne academics. Much if not all of this borrowing and spatial inter-referencing was facilitated by intermediaries, who recomposed these policy elements ‘from elsewhere’ into arguments for novel and locally-tailored proposals. Through these processes of spatial argument, intermediaries imply that it is risky to follow an approach different to their proposals, encouraging local actors to follow their recommendations as a matter of necessity. Every regional council I spoke to sourced major elements of their policy implementation approach from other places.

While policy mobilities scholarship has previously identified spatial inter-referencing as a political strategy for actors to advocate for urban and regional policies (McCann and Ward, 2011), this chapter provides ample evidence for the existence of these strategies in the realm of environmental policy. Through myriad ‘hard’ and ‘soft’ forms of policy advocacy and advice, and through model-reproduction, model-repurposing, and recomposition strategies, intermediaries are strategically shaping the institutional void of freshwater policy to privilege specific interpretations and the interests which benefit from that interpretation.

5.8.2 Policy models are value-laden and crystallize selected interests

The proliferation of national policies with competing objectives and requirements has generated an industry of intermediaries who specialise in providing advice on policy translation and integration (Moss et al., 2009; van Enst et al., 2017). In providing this advice, Moss et al. (2009) acknowledge that intermediaries have their own interests, but they do not elaborate on how these interests are enacted in this process of policy translation. In contrast, policy mobilities scholars emphasise that policy knowledge is fundamentally political. Scientific knowledge and policy models condense ideological assumptions and material elements into a specific version of the policy problem and its putative solutions (e.g. Sarewitz, 2004). As environmental scholar Turnhout (2018: 366) observes, ‘when electing to represent the environment in a specific way, science produces objects that are amenable to certain specific governance logics and which attract and privilege certain groups of actors.’

Scientific models such as Overseer® provide a way of ‘seeing’ the water quality problem and managing it in a way that aligns with other policy discourses (see also Yates et al., 2017). The structure of Overseer® focuses on nitrogen and makes (contestable) assumptions about how nitrogen flows through farm and freshwater ecosystems. Policy models such as Overseer® simplify the world to render certain phenomena visible and manageable, but this process involves ‘selective ignorance’ (Elliott, 2012) about other phenomena and processes that may be important to other actors or in other contexts.

In addition to the formulation of Overseer® and its uncertainties, the updating of the software has proven a flashpoint for industry, which has been faced with massive increases in costs resulting from the changing science of the model, fracturing political support for Overseer® by farming organizations. It is perhaps ironic then that Overseer® - a nutrient budgeting tool developed to improve industry profitability - has become a key tool for environmentalists seeking environmental protection. While on the surface Overseer® seemed to support the realization of an environmental effects-based regulatory philosophy consistent with the RMA, it was not designed (nor intended) as a mechanism for monitoring land use compliance for freshwater limits. In this way the story of Overseer® mirrors other accounts of policy models that have been ‘transformed in ways that not only exceeded the visions and predilections of their original architects but... in significant respects confounded and even contradicted them’ (Peck and Theodore’ 2010: 171).

If Overseer® has been somewhat effective at structuring how freshwater ‘limits’ are thought about in regional planning, it is not the only model in circulation, nor are limits the only concept being structured. Indeed, the notion of Good Management Practice has emerged as an alternative (and perhaps complementary) policy model, providing certainty of land user obligations while giving up certainty of environmental protection. The differences between Overseer® and GMP approaches as policy models are not simply technical but involve deep ideological assumptions about how public environmental resources and risks should be distributed across private and public actors. Just as Overseer® and GMP structure thinking within an ambiguous terrain of ‘limits’, cultural values assessments and the social science of collaboration are structuring thinking about how ‘tangata whenua values’ and ‘local values’ - as required by the NPSFM - should be understood by councils. Māori and non-Māori researchers and practitioners are generating tools to empower iwi/hapū within western resource management discourses and are constructing policy models and tools that connect the rights and interests of Māori (as guaranteed in the Treaty of Waitangi) to a plethora of specific practices, including open dialogue and meaningful sharing of decision making

between Māori and councils. Similarly, models of collaboration are being composed and promoted by intermediaries with significant effect. The difference between citizen-based or interest-based representation is just one among many decisions about collaboration that intermediaries can alter through their roles as consultants and knowledgeable experts. Further, through carefully curating the experiences of different regions into notional 'best practices', intermediaries attempt to lower the perceived risks of taking new policy approaches (e.g. Harmsworth et al., 2016; Robb and Harmsworth, 2016).

As geographer Prince (2016: 426) observes, 'expert practice produces objects around which politics can form in sometimes unexpected ways, and that ideas and ideologies can be attached [...] These objects create problems and possibilities for politics.' Through policy models and tools like Overseer®, GMP, Māori values assessments and collaboration models, intermediaries work on regional councils' conceptions of the world, structuring how they see the water policy problem and what constitutes a low risk way of addressing it. These models involve contestable assumptions and ideological commitments, so it is an important task to identify these commitments, while also recognizing that policy models can and often do take on lives of their own.

5.8.3 Intermediaries reconfiguring local power relationships

While Moss et al. (2009) contend that intermediaries function to advise local authorities on implementation, this does not mean that intermediaries' advice is always well-received by their clients. Indeed, this chapter has shown that intermediaries can behave strategically 'against' their clients in some ways, and the recommendations of intermediaries can be ignored, adopted, adapted, and rebutted by local authorities. The relationships between intermediaries and their clients is not frictionless, and the influence of intermediaries on policy implementation can take strategic as well as operational forms.

Auckland Council's experience with the international review of its water planning demonstrates that the influence of intermediaries hinges in significant part on the power relations within councils. There, Melbourne academics' recommendations challenged a powerful internal faction within Auckland Council, which publicly rebutted the report and sought to suppress public scrutiny and debate about Auckland's stormwater policies. In this sense, the efficacy of intermediaries is moderated by how they relate to the power-geometries within local authorities. In Auckland, the researchers' intervention was largely structural and strategic, about bringing an external shock to the system, to break open conversations about the nature of Auckland's environmental ambitions. As summarized by a consultant,

The scientific community is quite small and insular and can be quite resistant to new ideas and change. Sometimes that needs to be broken open, and sometimes that's about using international expertise rather than local expertise. (Consultant 5b, 2017)

Expert contributions can be crafted at the strategic level for or 'against' the status quo of local implementation priorities, but they can also be crafted at the operational scale to direct specific local actions. In contrast to Auckland, in Hawkes Bay and Northland, intermediaries forged alliances with regional bricoleurs bureaucrats to craft locally-tailored and operational proposals for collaboration and the use of Māori values assessments, successfully securing support for them from managers and politicians within council. And further, sometimes the same actors can achieve more operational *and* strategic influence by becoming intermediaries:

A classic example - I'm doing some work at the council at the moment, [on] a problem. When I was working at [the council] I could have worked on it for free and it wouldn't have costed them anything, you know. But since I've left council, the first thing, they called me and said we really want you to work on this, but we couldn't ask you while you worked for council. And I was like 'why?' and they were like 'we need a perception of independence'. (Consultant 5b, 2017)

Whether pitched at the operational or strategic level, intermediaries' work carries a 'credibility' that stems from their purported independent status.

Yet independence is not enough to be influential in local settings: intermediaries activities are always mediated by the internal power dynamics within councils. From this recognition, a distinction can be between how 'success' is defined by intermediaries versus their allies within local governments. While intermediaries may wish to have a direct effect on council operations – e.g. the use of Overseer® or the use of a collaborative model or values assessment tool - their council collaborators may have more diffuse and strategic objectives. In the Northland case, for example, while the council champion who commissioned the Māori values assessment felt this had a significant effect on the council's thinking – based on their own situated understanding of council politics – this is not the same as local Māori or even the Māori consultant agreeing that the assessment was meaningfully embraced by the council. Similarly, with Horizons, even environmentalists can disagree about whether taking Horizons to court over the One Plan was the right move for freshwater politics both locally and nationally. In these ways, intermediaries and their interlocutors make strategic choices about how to intervene in a given place, based on their own assessments of how their work might affect things locally and nationally.

5.8.4 Intermediaries in a dynamic interplay with the state

Much policy mobilities research focuses on practices of voluntary persuasion in which charismatic policy boosters promote their version of the policy problem in local settings (e.g. McCann, 2011; Wood, 2014). This chapter shows that while intermediaries may target operational issues in specific regions, their strategic orientation is often wider and aimed at affecting outcomes across multiple regions.

There are at least three ways in which wider influence upon regional interpretations can be achieved. The first two – hard and soft approaches – have been discussed above. Hard

approaches to influencing other regions involve securing official sanctioning for a particular model or policy element through the judiciary (i.e. Environment Court), as in the case of Horizons. Here, intermediaries seek official declarations of interpretation of the law (the RMA) and its specific regulations (the NPSFM) that can be used as resources to litigate for desired outcomes in other regions. Through the production of case law, intermediaries and advocates have a ‘hard’ source of authority from which to leverage their advocacy of certain policy approaches in multiple regions. Through these hard and soft approaches, intermediaries can affect the terrain of water policy interpretations.

There is also a third type of approach to influencing what happens across multiple regions. This involves a dynamic interplay with central government, and can take hard and soft forms. At the national level, the state can affect the playing field of intermediaries by passing legislation, creating new regulations (without changing the law), and supporting sanctioned policy approaches through in-kind investment (e.g. having bureaucrats support GMP work with industry) and direct funding (e.g. Overseer®). Overseer® began its life as a voluntary tool for farmers to use, but as it has gradually been adopted in planning and as regulations have been contested by farming organizations, the Ministry for Primary Industries along with MfE have worked with farming organizations to voice a chorus of caution against using Overseer® in a specific regulatory capacity. Industry groups have lobbied for the promotion of GMP as an alternative approach within the Land and Water Forum, securing key investments from government to prioritize GMP and to embed it into planning frameworks at some point in the future (MfE official 5d, 2016; see also MfE, 2013a, 2016b). Through these activities, industry groups are attempting to harmonize conceptions of the water policy problem – and how it should be addressed – across the regions. As it stands, however, GMP remains ‘soft’; while it is being recommended through government-produced guidance, it is not yet written into law or law-derived regulations.

In contrast to the soft status of GMP, the state has taken a ‘hard’ approach to defining collaboration. While practitioner networks can promote competing definitions of collaboration through evaluations, lesson-drawing, and other forms of knowledge brokering, the state has centralised and narrowed this discourse by developing its own guidance on collaborative processes (MfE, 2015). It later passed the RMA Amendment Act (2017) which specifies criteria that a collaborative process must meet for it to receive special plan-making authorization (MfE, 2017i). The state has provided only a narrow definition of collaboration that it will recognize and reward with immunity from certain types of appeal. However, because the new provisions i) define collaboration narrowly, ii) do not compel regional councils to use collaboration, and iii) have arrived several years after most existing collaborative processes have begun, it seems unlikely that these legislative provisions will affect the current round of NPSFM implementation. As with collaboration, the state has also iteratively refined its definition of Māori ‘rights and interests’ through successive provisions added to the NPSFM in 2014 and 2017. However, these provisions set very low expectations for regional councils, and the work of Māori intermediaries to promote best practices is about championing a historically accurate and just interpretation of the obligations of the Crown under the Treaty of Waitangi. In this case, while successive NPSFM revisions have not done much to shift the material requirements placed upon councils, they have at least shifted the baseline in a positive direction, which provides a textual resource that intermediaries can draw upon to build support for more substantive co-governance initiatives.

Intermediaries operationalize the concepts of ‘limits’, ‘collaboration’, and Māori ‘rights and interests’ with local objectives in mind, but also with a view to steering state discourses and policies. An aim for many intermediaries is to consolidate specific concepts and interpretations into state discourse. They attempt this indirectly through promoting policies in regional settings, as well as directly through lobbying for state investment into certain approaches and convincing politicians and bureaucrats to write specific concepts into legislation and policy.

5.9 Conclusion

Māori researchers and practitioners, environmental and industry lobbyists, resource management experts and scientists can be understood as intermediaries seeking to affect the terrain of water policy implementation in New Zealand. These intermediaries employ a range of epistemic, argumentative, and juridical strategies to harmonize conceptions of environmental ‘problem’ and its solution across regions. These strategies range from emphasising soft or voluntary methods such as spatial lesson-drawing and custom-made policy recomposition, through to hard methods such as setting legal precedent through the courts or embedding a full scientific model into national or regional policy. Through these activities, intermediaries struggle to affect local and central state actors’ ‘conceptions of the world’ (Alasuutari and Qadir, 2014: 68). Consultants and intermediaries shape the terrain of what seems possible and what seems low risk for regional councils and MfE to do. By producing and circulating stylised accounts of water policies from other places, and curating these lessons to specific policy audiences, intermediaries are actively configuring ‘common sense’ regarding the new terrain of New Zealand water policy. Through processes of inter-referencing and policy mobilization, intermediaries are strategically tilting interpretations toward the use of specific methods and outcomes, though these efforts are dynamically enabled and constrained by local politics as well as national and structural developments.

New Zealand’s resource management system has facilitated demand for a particular type of expert community focussed on litigating the meaning of environmental law and the quantification of environmental effects. This has led to translocal intermediaries acquiring significant ‘meta’ knowledge of the planning system, and the cultivation of spatial inter-referencing as a political strategy and a form of political authority. Scientific models such as Overseer®, regulatory models such as Good Management Practice, tools such as cultural values assessments, and concepts such as collaboration are all mobilized and shaped by intermediaries. These policy elements are built, circulated, and promoted by intermediaries,

and they are not neutral: they crystallize ideological assumptions and produce asymmetrical effects. Sometimes intermediaries can be effective in structuring local policy implementation – as with Hawkes Bay – and in other cases, like Northland, the policy implementation champions were council bureaucrats supported by intermediary networks. Auckland, in contrast, revealed how factions within the local state can mobilize to reject and undermine the work of intermediaries. The work of intermediaries is shaped by local politics and the personalities involved, and exists in a dynamic interplay with central government policy discourse.

To the literature on water policy intermediaries, this chapter has contributed an empirical investigation of the specific methods used by intermediaries to structure the freshwater ‘problem’ for local state actors, and examined some of the ideological assumptions and distributive implications (i.e., the politics) of this work. To the policy mobilities literature which has thus far focused on the movement of single policies across space, this chapter has explored the multiple spatial strategies of intermediaries acting across multiple New Zealand regions, which includes but also exceeds the promotion or adaptation of pre-formed policy models. This has allowed a more comprehensive analysis of the discursive context in which environmental policy implementation pathways are being structured by the use of policy models. A narrow focus on a single policy or model – such as Overseer® constitutes only one dimension of the wider struggle to define different elements of the water policy problem for different ideological reasons. By focussing on the diffusion and recomposition of policy elements across a national setting instead of just the mobilization of policy elements between two sites, we can situate how these policy elements constitute part of a wider set of strategies for intermediaries who are competing for the attention and support of the state apparatus.

Chapter 6 – Conclusion

I began my PhD in 2013, expecting to trace the interpretive struggle over the key terms of the 2011 NPSFM to their stabilization and perhaps conclusion. As it happened, however, the policy was revised heavily in 2014, and again in 2017. The goalposts, in short, had moved. In addition, the Te Urewera Act 2014 and the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 have altered the interpretive landscape of freshwater planning at local, national, and international scales. These radical pieces of Treaty settlement legislation are world-firsts for recognizing environmental entities – a national park, and the Whanganui River – as spiritual beings with moral worth and legal rights. What these new laws might mean for regional freshwater planning remains to be seen, or rather, to be worked through. What these developments indicate, however, is that the project of ‘filling the void’ is unfinished and perhaps unfinishable. New regulatory layers and reference points create new interpretive opportunities, and many actors – central state, local iwi, and national networks of Māori policy experts – can and will contribute to shaping the interpretive context of policy implementation. Where one void closes, and other opens. To study decentralization, we need to understand it as an unfinished project that is constantly unfolding.

6.1 Theoretical contributions

The administrative decentralization of environmental policy can certainly produce inequitable political and environmental outcomes. This is especially the case when new policy requirements are foisted onto resource-strained local governments without supplying resourcing with which to undertake new tasks (Larson and Soto, 2008; Wallington and Lawrence, 2008). It is also true that ‘scaling out’ decision making processes to include non-state actors (Cohen and McCarthy, 2015) can result in powerful economic interests exerting more influence in environmental governance (Brisbois and de Loë, 2017). However, in addition to documenting these and other patterned outcomes of environmental

decentralization, there is also a need to identify how and in what contexts the processes and outcomes of decentralization can be composed differently.

I have drawn on the idea of an ‘institutional void’ (Hajer, 2003b) to conceptualize how a decentralized environmental policy is actively struggled over by state, local government, and non-state actors as they attempt to structure and stabilize the parameters of the policy problem. Since the central state no longer has complete control over policy implementation (if it ever did), the dominant mode of influence shifts from compulsion (through regulation) to convincing power. Convincing power is dispersed across a wide array of actors, including non-state intermediaries and local government staff. These actors craft interpretations of policy and attempt to convince others of the merit of these interpretations, effectively competing for authority. Alasuutari and Qadir (2014) argue that in such conditions, ‘governance works by way of influencing other actors’ beliefs and views of the way in which the social world is organized, the role and subject positions of actors, and the nature of ethical or valued goals of social change’ (p78).

The overall theoretical contribution of this dissertation has been to draw the interpretive conceptualization of power together with the idea of the institutional void to understand the process of policy implementation, and decentralized environmental governance more broadly. I have conceptualized the implementation of environmental policy as a site of active (interpretive) struggle, rather than as a *fait accompli* determined by institutional arrangements. While the notion of an institutional void draws attention to the emergent nature of interpretive struggles over policy meanings, it does not tell us ‘where to look’ or ‘who to look for’ to understand how the institutional void is being structured. Therefore, I have proposed that at least three types of actors merit empirical and political analysis within this process: the state bureaucracy, local government, and non-state actors such as expert intermediaries. As I elaborate below, each of these types of actors possess unique capacities to channelize the institutional void of policy meanings in particular directions.

6.1.1 Policy structures the void

The state influences the shape of policy implementation (and policy outcomes) in the most significant way: by writing the policy. The government selects the policy concepts and languages, articulates formal requirements and accountabilities, and disburses resourcing. However, even government policy is relationally constrained, in at least two ways. First, as Chapter 2 showed, even ideologically-driven government ministers must present policies that nominally address widely perceived public problems. For example, after outcry against the lack of national bottom lines in the 2011 National Policy Statement for Freshwater Management (NPSFM), the 2014 revisions included ‘wadeable’ standards for water quality. In turn, when these were criticized, Minister Smith introduced swimmability targets and performance reporting for regional councils in the 2017 amendments to the NPSFM. In these ways, the state does not have pure autonomy over policy design but, to be seen as legitimate, must address the environmental ‘problem’ as perceived by various publics in civil society (Whitehead, 2017). The state and its policies are thus dynamically shaped by the demands and concepts of civil society, as well as the need to align with other authoritative representations of the environmental problem, such as diagnoses of scientists and the Parliamentary Commissioner for the Environment. The second type of constraint is much more specific: the policy language must find a balance between being open-ended versus prescriptive. If policy is too prescriptive then unintended and undesirable consequences can result, and support for the policy can falter. On the other hand, if a policy is pitched at a high enough level of generality – such as ‘maintain or improve’ freshwater quality – it can find consensus support, as it did in the Land and Water Forum. These forces often cause policies to be vague and ambiguous (Hupe et al., 2014), including in environmental governance (Sevä and Jagers, 2013). As a result of these two pressures, state environmental policy can be understood typically as setting the broad (publicly-approved) parameters of the institutional void, but does not specify every possible local variation of these parameters. As this dissertation has shown, this specification will be struggled over by a range of other actors.

6.1.2 The state uses hard and soft means to structure the void

While the central state has formally divested itself of implementation responsibilities in decentralized settings, it nevertheless remains a powerful and interested actor in the implementation process. Understanding how the state pursues its interests in the implementation process is a first step to characterizing how the institutional void is structured, and how a politics of policy implementation might be constituted. For this, we can ask: what are the state's interests in policy implementation, what mechanisms are used to secure those interests, and what space does this leave for politics? Regarding the question of state interests, Chapter 3 revealed at least three layers of intentionality in MfE's implementation activities. At the political level, the Minister approves budgets with MfE's Chief Executive to deliver a broad program of work within prescribed policy directions. Within MfE's budgetary constraints, the Water Directorate has organized a reflexive and collaborative policy development process that draws in civil society actors to 'co-design' various guidance and projects with officials. At the level of teams, officials design and undertake projects, drawing on professional relationships and personal values. While it is tempting to attribute a coherent ideological purpose to state action, in reality the interests of the state are plural and the actions of bureaucrats must be decoded through multiple layers of discretion and organizational reprogramming before attribution to governmental ideology can be identified or used to explain the specific form of bureaucratic action.

Regarding the mechanisms of state action, two broad observations can be made. First, while the state has retained a hand on the steering wheel of policy – revising and tightening the NPSFM every three years – it has not acted unilaterally. The Land and Water Forum and the Iwi Leaders Group, working with MfE officials, have shaped the agenda of policy items that the government has acted upon (albeit selectively so). Further, with the ethos of collaborative policy development in MfE, officials have been able to create and facilitate forums with civil society and other implementing actors, in which policy agendas can be shaped by the 'outside'

while also being curated by bureaucrats to align with organizational priorities and the government's stated policy program. Thus, even though MfE officials operate within constrained policy parameters, they can and do work with civil society forces to affect the future of those policy parameters. Second, as observed by many environmental governance scholars (Mol, 2016; Benson and Jordan, 2017; Perkins, 2017b), the modus operandi of the environmental bureaucracy is expanding from a narrow focus on science and regulatory development to prioritize softer forms of social influence, such as the provision of guidance and promoting voluntary mechanisms of social change. This is a double edged blade: on the one hand, this reflects a shift in resourcing away from functions of environmental regulation (Castree, 2010), but on the other hand these soft mechanisms are generally subject to greater bureaucratic discretion, and there is greater possibility for tailoring these mechanisms to engage bottom-up (rather than ideologically-determined) agendas. Consider, for example, that the Economics 101 course run by MfE officials was less of an ideological indoctrination exercise, and more of a space for troubleshooting and having frank discussions about the appropriateness of such methods in different situations. Further, in the New Zealand context, MfE is not the enforcer of regulations so much as the creator of policy (technically, supplier of policy advice to the Minister, who then creates policy). Thus MfE's shift toward soft influence mechanisms does not reflect a zero-sum move away from using regulation to secure environmental outcomes; if anything these projects are 'additional' to previous work, and additional budget has been provided through the freshwater reform process. Seen in this light, the political question is not – or at least not only – whether soft approaches should be used to structure the institutional void, but how they might be applied to achieve different types of objectives. This 'how' conversation merits further investigation and analysis, though I hope Chapter 4 provides some resources for thinking about how soft mechanisms can be constituted in politically reflexive ways.

Characterizing the activities of the state within an institutional void enables us to scope political opportunities in the implementation process. In Chapter 3 I focused on identifying

the moments and qualities of discretion exercised by bureaucrats in the policy process. At a high level, we can see how the Minister's interests are constituted and recomposed through the practices of the bureaucracy. This is not a story of the tail wagging the dog, the Minister still retains significant power, but it is important to analyse *how* that power is wielded, if we are to consider how it encounters limits and how it might be resisted or transformed. Rather than assuming a straight line between political intentionality and bureaucratic action, environmental governance scholars should engage with the dynamic relations between politicians and the bureaucracy, and in particular on the logics and qualities of discretion. Doing so allows us to consider how bureaucrats at different levels in the hierarchy might exercise discretion to inject democratic values into their projects, as well as what other values govern bureaucrats' activities.

In the broader context of the institutional void, governance scholars should aim to conduct a situated evaluation of political prospects for engaging through the state to affect implementation outcomes. In the New Zealand case, the reality of substantial and frequent revisions to the NPSFM have made MfE the centre of attention and a major force within the institutional void. While civil society groups such as the Land and Water Forum and the Iwi Leaders Group have contributed to the freshwater reform process, MfE bureaucrats have been centrally placed to interpret these contributions and translate them into specific policy proposals. This process of strategic translation is perhaps where the greatest political agency lies within the bureaucracy, in which bureaucrats forge creative alignments between civil society demands and government policy priorities through the careful wording of specific policy provisions. While soft implementation projects such as the economics workstream may offer greater freedom of discretion for bureaucrats and are surely valuable to the regions affected, soft projects are broadly immaterial to the specific form of implementation that regions undertake. This is especially the case when the criteria for MfE-funding for regional projects is based on a region's existing capabilities to undertake the project proposed. Given that regional councils care more about meeting new policy requirements than reworking

their responses to previous policy iterations, it is perhaps unsurprising that much of MfE's guidance material has not been used. If there was any potential for soft mechanisms such as guidance to influence regional councils' perceptions of the world, this potential has been precluded by a dynamic policy context in which new policy requirements came out at the same time as guidance for past policies. In short, while soft mechanisms might have a significant role to play in establishing norms of policy interpretation in settings where the policy environment is stable, in a context of policy flux there is reason for regions to stick to implementation pathways that are centrally-*required* rather than centrally-suggested.

Characterizing the role of the state is an important step toward understanding the fields of power structuring an institutional void. I have demonstrated that this can be done by mapping out the intentionalities of state actors, interrogating the mechanisms the state uses to affect interpretive norms around policy, and identifying moments and qualities of discretion throughout the bureaucratic process. Together, these three strands enable us to think in more nuanced terms about where and how to engage within the state to enact a democratic and ecologically-oriented politics of implementation.

6.1.3 The institutional void has regional branches

Thus far, the institutional void has been treated as a spaceless phenomenon: a range of possible policy interpretations configured at the national scale by historical debate and manipulated by soft state action. However, as geographers have argued for over a century, place matters in all human affairs (see Castree, 2005, for a review), including policy making and implementation (McCann and Ward, 2010). But *how* does place matter?

At one level, place can be understood as a unique constellation of geographically-embedded contextual elements (Castree, 2005). In freshwater management, this might include ecosystems and their histories, recent and historical political conflicts and the meanings and power-factions associated with these, economic interests and path-dependencies, as well as

organizationally-framed constraints such as regional council budgets and past planning decisions. In this conception of place, the institutional void of environmental policy is not evenly experienced by all implementing actors. Local governments are of different sizes, which affects the scale and qualities of their implementation projects. Local governments are also responsible *for* different biophysical environments, are responsible *to* different constituents. Further, implementing organizations have different organizational cultures, face distinct environmental pressures and political demands, and are structured by co-governance agreements and media-facilitated crises. All of this affects the precise character of implementation approaches used, as Chapter 4 sketched out. We saw, for instance, how Hawkes Bay is struggling with the periphyton standards because of its uniquely warm climate, and how Auckland's Unitary Plan and institutional restructuring affected its appetite for undertaking another round of litigious plan changes for freshwater. Northland's 'crude' approach to environmental classification and priority catchments was the best it could do with scarce resources, while Hawkes' Bay needed to run a process that was publicly-owned as a way to build trust after the Ruataniwha conflict, and Waikato's co-governance Vision and Strategy provided a specific mandate for the Collaborative Stakeholder Group to work. All of these contextual elements affect how different regions interpreted the policy requirements posed by the NPSFM.

While the place-based aspects of the biophysical environment, organizational resourcing, and local political conflicts all merit mention in explaining the precise character of these regions' implementation approaches, they are not sufficient to explain the implementation programs. A wider and more relational conception of place is needed to understand *who* is constructing implementation meanings, and *how* place comes to matter through this process. To restate my argument from Chapter 4, place doesn't matter to policy implementation by itself; place-based elements are made to matter through the work of policy bricoleurs who interpret place-based elements and narrate these into proposals for policy actions. I suggest that geographical bricolage provides a heuristic way to understand how creative policy actors

piece together elements of local context with organizational priorities, while injecting personal democratic values into implementation programs. Place comes to matter *through* these individuals, and the character of local implementation would be very different without them and their relational resources. Geographical bricoleurs compose elements of the local policy setting into arguments for structured approaches to national requirements. For instance, while Waikato had a co-governance arrangement in place, bricoleurs argued for an additional layer of collaborative governance to support and legitimize these radical new arrangements. Wellington didn't experience an ecological crisis of national significance; yet bricoleurs constructed successful arguments for massive investments into a pre-emptive Whaitua process that would be co-governed between council and Māori in a voluntary capacity. Put simply, these are not objective place-based crises for which only one legitimate implementation response is possible. Rather, these crises, if they can be called crises at all, are carefully curated and narrated elements of a place (Blanco et al., 2014), stitched together with accounts of impending pressures and demands upon regional councils (whether for local accountability or new national policy requirements), and justified with the support of network resources, such as experts and consultants.

It is worth noting that geographical bricoleurs do not work in strictly territorial arenas and networks. Geographers from Massey (2005) to McCann and Ward (2010) have emphasized that place consists of both territorial (geographically embedded) and relational (geographically disembedded) elements and meanings. Drawing on this conceptualization, we can expand our understanding of local policy implementation to recognize that New Zealand's regional bricoleurs act within multiple spatialities of vision and reach. The scale and scope of Wellington's Whaitua process was bold and far-reaching; it was also motivated by bricoleurs who had been heavily involved within the national Land and Water Forum and who were deeply committed to the collaborative approach that the forum championed. This relational network connection, more than any ecological need or enabling political environment, serves to explain the ambition and passion with which the Whaitua process was designed and

pursued. Across other places, relational connections proved pertinent: in Waikato, for example, a network including an Australian social researcher and local bricoleurs provided a source of extra-organizational motivation and intellectual justification for the collaborative approach being proposed. Indeed, across all five regions studied, bricoleurs worked with colleagues outside their organizations and across space to assemble and justify their approaches.

These examples show that space matters to policy implementation, but in ways that are socially constructed. Rather than imagining a uniform policy radiating across space and interacting with local context in a law-like manner to produce contextually-refracted policy implementation, Chapter 4 suggests a different picture. Place and context are certainly composed of biophysical elements and historical, political, and organizational circumstances that are unique to each region. But these elements do not determine how policy will be interpreted; a better explanation for the form and substance of policy implementation can be found by locating key geographical bricoleurs and examining their constraints, the contours of their agency, and their relational resources. This allows us to understand how geographical difference is *produced* and not merely *experienced*.

Building on both territorial and relational conceptions of space can allow us to read the spatial varieties of policy implementation in a new light. Chapter 4 contrasted MfE's top-down evaluation of NPSFM implementation with my own bottom-up assessment of five regions. When we examine implementation variation setting for territorial space, we see how the uniform requirements imposed by the NPSFM (such as ecological monitoring) carry different resource burdens and opportunity costs for different councils. Hawkes Bay and Northland, for example, must claw back monitoring resources from place-specific ecological investigations in order to comply with requirements of the 2014 NPSFM. When read for relational concepts of space, we can see that what enabled Wellington and Waikato's efforts were enabled by uniquely motivated and networked bricoleurs with interests in collaboration

and enough organizational capital to spend promoting a radical new approach. Rather than assuming that ‘good’ implementation (such as practised by Wellington or Waikato) can or should be expected of all regions, a relational approach to policy implementation focuses on the relational elements available to geographical bricoleurs, as well as the relational barriers.

In sum, this work has shown that regions encounter their own versions of an institutional void (contextual elements that may render some interpretations off-limits and others front-and-centre), that such regional voids consist of *both* geographically-embedded elements and the relational capacities of implementing bricoleurs. In this way, regional institutional voids are not purely geographical entities but rather relational fields surrounding the work of regional bricoleurs. Recognizing that space is not a passive backdrop for policy implementation helps to identify bricoleurs as key political actors within the policy process, and highlights the lived reality of struggle that bricoleurs experience within the implementation process.

6.1.4 The void is structured by non-state actors through epistemic means

The ‘scaling down’ of environmental policy implementation to local agencies doesn’t necessarily require a ‘scaling out’ of implementation to include non-state actors. In New Zealand, two broad forms of involving non-state actors (scaling out) can be observed. One is the formal participation of local residents and interests in decision making, such as residents involved in Wellington or Hawkes Bay’s collaborative processes. In these situations, non-state actors are involved as decision makers in a formal and structured capacity. But such participatory forums are often not required as a part of decentralization. While the NPSFM required councils’ water quality limits to reflect local and national values, these did not have to be generated through a formal participatory decision process. The second type of participation by non-state actors in a decentralized environment is what has been referred to by Alasuutari and Qadir (2014) as epistemic politics, that is, the way in which non-state actors struggle to influence others’ conceptions of the world. In the New Zealand case

explored in Chapter 5, these conceptions relate to ideas about freshwater limits, collaboration, Māori rights and interests, and what works in other regions and internationally. While I recognize that the first type of participation for non-state actors is important, I have focused my analysis on the latter, the role of experts as they actively configure the terrain of policy implementation across more than one place.

The moment of decentralization – in which responsibilities are delegated – creates unique situations of uncertainty for each implementing region. Every region has its own resources, issues, and capabilities, and must translate new national requirements into local implementation practices that makes sense and streamline with other regional needs or processes. I have shown that this process of sense-making is intensely political, with non-state intermediaries actively creating and promoting their favoured approaches to implementation as ones that ‘make sense’, while critiquing others as likely to be costly, illegitimate, and, in some cases, illegal. While intermediaries do not wield the power of regulation and compulsion, they earn their living through wielding the power of persuasion.

The structural context of decentralization creates a broad demand for intermediaries. With local authorities charged with implementing new national directives, local authorities must assimilate these new directives with myriad other governmental directives, as well as with local organizational strategies, infrastructure planning, and other concerns. This creates the need for policy integration (Moss et al., 2009; Edelenbos et al., 2013), as well as for people who are experts in specific policy practices that might be required for policy implementation (such as planning rules, collaboration, and Māori engagement). Across many industrialized Western contexts, local and central governments have restructured in ways that retain some of this expertise in-house, while much is procured from the outside as-needed in relation to specific situations.

In New Zealand, intermediaries can be classed into two broad functions. The first type are thought-builders, who engage in epistemic politics by crafting frameworks of thought and

action in relation to the process of policy integration and implementation. Consider, for example, the researchers involved in designing Waikato's or Hawkes Bay's collaborative processes. Such researchers provide frameworks for thinking about collaboration: what it is, how it should be organized, how it can fulfil local and organizational objectives, and how it should be specifically undertaken. In Chapter 5, we also saw how scientists and administrators have constructed the software Overseer® to provide an authoritative and transportable way of modeling and understanding water quality limits. Similar examples can be found in thought models related to collaboration, and models of co-governance with Māori. I argue that these intermediaries are powerful in the sense that they provide productive thought tools for councils.

The second type of water policy intermediaries are litigators, who construct legal arguments for and against specific policy provisions and their interpretation. Litigators such as lobbyists and non-governmental organizations engage with the newly-porous state policy making apparatus to affect the initial content of policy language (for example, through the Land and Water Forum, the Iwi Leaders Group, and MfE's various working groups on freshwater reform). Once the policy is written, however, debate over policy meanings continues in a different register. In Chapter 5 we saw how the Environmental Defence Society won an Environment Court case against Horizons Regional Council regarding their use of the Overseer® model, forcing Horizons to enforce their original Overseer®-calculated biophysical limits. While litigators do not wield the power of enforcement or of policy, they craft pre-emptive arguments about the legality of planning provisions, and they 'win' by convincing local and national policy makers that the courts will side with them unless policies are amended to address their concerns. Litigators become powerful by convincing others that future court action will be costly and is avoidable. They work through the courts to extract specific and universal meanings for policy terms, which enables them to alter the field of what 'makes sense' for other regions.

In addition to identifying broad types of intermediaries, it is important to understand how they seek to structure the institutional void. Intermediaries work to structure the institutional void by promoting policy models that connect policy terms with specific practices. As Chapter 5 explored, scientific and policy models such as Overseer® provide a vehicle for institutionalizing a fundamental debate about policy objects such as environmental limits: should limits be about ensuring certainty of cost, or certainty of environmental protection? Intermediaries congeal around preferred policy models, sometimes constructing models themselves, but more often borrowing and adapting them from elsewhere. Thought-building intermediaries use models to help solve local problems and secure local objectives; litigators craft and contest models such as Overseer® and Good Management Practice as a way to secure their nationally-scaled objectives across multiple local settings. Put differently, policy models provide a kind of de-facto mode of harmonizing environmental regulation across space. In addition to policy models, spatial lesson-drawing provides a rhetorical strategy to aid in convincing local and central governments of the virtues of a proposed approach or policy idea. Intermediaries can seek operational or strategic objectives through their interpretive interventions. For instance, their aim might be to direct Auckland Council to undertake a specific operational practice, or it can be more widely to open up conversation around an issue, as in the case of internationally benchmarking Auckland's stormwater policy. Finally, as intermediaries cultivate their convincing power to promote a specific vision of what 'makes sense' for policy implementation, their aim is often to convince the state to adopt and institutionalize this as common sense. Through these mechanisms of persuasion, intermediaries work in places, but also across space, to institutionalize their conception of the world in a way that others must recognize and assimilate.

Decentralization creates the context for intermediaries to influence the institutional void. By delegating implementation to local authorities, this creates the possibility for local authorities to improvise with local elements in pursuit of local and national objectives. Intermediaries then engage in the processes of governing implementation. Intermediaries can offer

supportive or antagonistic advice to local implementing authorities through legal reasoning, spatial inter-referencing, and constructing policy models that secure locally-valued organizational objectives. Intermediaries also engage trans-locally by securing universal rulings of policy intent through the courts, by affecting governmental investment priorities, and by constructing thought-tools and policy models that transcend place and which secure authority through the number and quality of actors invested in their use (such as Good Management Practice and Overseer®). By identifying and interrogating the practices of intermediary work, my objective has been to reveal the meaningful stakes involved in this particular way of arranging our environmental democracy.

6.1.5 Who wields the power to structure the institutional void of policy? A schema for analysing political struggle over policy implementation

The metaphor of an institutional void emphasises the openness of outcomes that depend upon the struggle that unfolds within it. When a new policy is enacted, or a new governance mechanism created, all is not predetermined by policy design or forces of uneven political economy. These things do matter, but *how* they matter requires empirical description and situated political analysis.

This dissertation has explored attempts by newly-powerful sets of actors to structure the void of environmental policy implementation in a decentralized setting. I began by characterizing the historical development of policy and the contested meanings of its various provisions. I then identified three sets of actors whose new roles are influential within this emerging regime. Beginning with the state, I considered how the state imagines and exercises epistemic influence on the interpretive landscape of policy. Mainly, this has occurred through the policy itself, and the threat of policy revisions that have materialised frequently. Soft forms of influencing meaning such as producing guidance or support projects for economic valuation are less operationally significant in terms of changing regional councils' implementation practices. Where soft forms of influence do gain purchase is by cultivating common sense

with regional implementation actors through facilitated exchanges, which can then feed back into future policy revisions. Overall, however, the state has not retreated from regulation but has supplemented this role with soft tools.

Implementing local actors such as regional councils also have newly-recalibrated roles in the decentralization. While regional bricoleurs are constrained by their political and bureaucratic environments, in the cases examined here bricoleurs have found enough leverage in the requirements of the NPSFM to propose, secure support for, and undertake costly and challenging experiments in collaborative environmental planning. Bricoleurs are neither wholly constrained by the NPSFM itself, nor by their local contextual circumstances; there is politically significant creativity involved in their work, and environmentalists might do well to recognize this work and seek to engage in co-constructing regional improvisations.

The third type of actor with newfound powers are intermediaries, who circulate across space offering preferred policy models, court challenges, and spatial arguments for ‘common sense’ policy. Intermediaries do not wield the power of national policy or local planning rules, but they can wield the ‘hard’ power (and costs) of the court system, as well as the convincing power of spatial inter-referencing and policy expertise. Intermediaries actions and arguments, as with other actors, are not wholly determined by their nominal ‘interest’, as arguments must be both located within place and legitimated by expertise. Overseer® and Good Management Practice constitute mechanisms of exercising epistemic power as intermediaries seek to enact these implementation models into national government priorities as well as specific local planning settings.

My accounts of these actors have traced contours of constraint while also attending to moments and qualities of agency. Civil society can act to shape the categories of the state, bureaucrats can act to reconstitute the interests of the state through specific projects of inclusion and participation, local bricoleurs can act to assemble and undertake radically new planning practices, and intermediaries can act to shape local circumstances as well as

national trajectories of thought and action. The politics of decentralization is ongoing: the struggle continues, and remains unfinished. Desirable ecological and democratic outcomes have not all been foreclosed due to the act of decentralization; while decentralization changes the players and their roles, it is people and their practices who drive outcomes on the ground.

More broadly, it is worth considering that while the politics of the institutional void can be engaged from within each of these three types of organizational locations, it can also be engaged across them. Consider, for example, that bricoleurs have generally drawn on intermediaries for ideas, legitimacy, and motivation. Many bricoleurs even become intermediaries, and vice versa. Further, oftentimes regional bricoleurs move to work in/for central government, or as consultants working for their own councils in a different (and often more powerful) capacity. Thus, it might make more sense to say that power in general lies with class of technocrats who, while they may oppose each other regarding environmental and economic priorities, remain collectively committed to a certain type of rule in which experts determine the processes and content of environmental regulation (see also Prince, 2016). In New Zealand, the institutional void was not – or at least not simply – shaped by the independent actions and associated interests of central government, local government, and intermediaries. Rather, New Zealand's experiment in collaborative and limits-based freshwater management has been governed by the same pool of people occupying different roles at different points in time. The revolving door between central government, local government, and intermediaries has meant that the institutional void created by the NPSFM has been governed by a relatively close-knit group of expert actors hashing out ideological political differences through the 'technocorporatist legal formalism' of planning and related domains (Jackson and Dixon, 2007).

Having described the core theoretical contributions of this dissertation, the next three sections conclude by pivoting to several broader audiences and purposes. The next section distils three lessons from the New Zealand experience about governing the environment

through decentralization. Section 6.3 then considers some future research directions, and Section 6.4 offers a final personal reflection on the politics of decentralization from the perspective of geography.

6.2 Lessons for decentralizing states

New Zealand's experience with freshwater policy reform offers valuable lessons for scholars and practitioners of decentralized environmental governance in other settings. In British Columbia, for example, the province's Water Sustainability Act (2014) includes the potential for bottom-up improvisation by municipalities and other actors. Questions arise regarding how such a law should be implemented, how responsibilities should be dispersed, funds allocated, and implementation resources produced. To respond to such questions, I will abstract some high-level learnings from the New Zealand experience, in part by comparing the different styles of decentralized freshwater governance offered by the fifth National government (2008-2017) and the sixth Labour government (2017-).

The sixth Labour government (2017-) has indicated plans to provide further prescriptive regulations through the NPSFM mechanism (see postscript). The new Minister for the Environment has indicated that changes to the NPSFM may include standardizing limits, strengthening environmental bottom lines, and halting intensification. At a glance, this reflects a recentralization of central government authority. But, in addition to thinking hard about the *design* of this next recentralized policy, it is worth thinking about the wider 'regime' of policy implementation that affects the outcomes that such an environmental policy might hope to achieve. Here I distill three lessons from the New Zealand experience that can offer guidance for other decentralizing regimes.

6.2.1 Changing environmental practices requires a whole-of-government approach

Environmentally impactful activities such as farming or urban development are influenced by many factors, and involve a series of judgements weighing up different priorities and risks.

Changing one of these elements through regulation – such as forcing councils to measure the nine attributes of the National Objectives Framework – can have flow-on effects to other organizational tasks and priorities, and create unintended costs elsewhere in the system. The great value of the Land and Water Forum process was that the Forum had scope to imagine reform across the whole resource management system, so the many working parts of the freshwater policy apparatus could be analyzed and alternatives proposed to enable a simple, fair, and efficient transition to a limits-based governance framework.

The fifth National government, to its credit, approached freshwater policy reform from a whole-of-government perspective. That government linked MfE to the Ministry for Primary Industries to drive water policy development and implementation, drawing (albeit selectively) on the Land and Water Forum's system-wide recommendations. The involvement of the Ministry for Primary Industries provided crucial alignment between environmental regulations and the strategies of primary industries. The fifth National government also pursued a broad plethora of initiatives, including reforming the Resource Management Act 1991 to include Māori participation provisions and collaboration mechanisms, amending the NPSFM, creating the \$100M Freshwater Cleanup Fund, providing increased budget to MfE to drive collaborative policy development and implementation with stakeholders, and reorganizing the science system around questions of sustainable land and water use. These changes also attempted to systematically embed economic rationality into the RMA and into the NPSFM 2017; I am not contending that these policy objectives were ethical, just that they were comprehensively pursued. In contrast, the sixth Labour government has indicated that it will primarily use a revised NPSFM to improve freshwater quality, and this will be supported with prescriptive standards for specific land use practices (MfE, 2018b). There has been little discussion of whole-of-system reform across environmental regulation, science, and primary industries, no talk of budgeting for policy implementation support, and no recognition that other recent government policies such as the Urban Capacity National Policy Statement fundamentally contradict the NPSFM. Further, the Ministry for Primary Industries

has been decomposed into separate Ministries of Agriculture, Fisheries, and Forestry, all of whom have different ministers, and likely, objectives. A lesson then, is this: a specific policy should be enacted within a broader suite of interpretive resources that all point in the same direction. The more interpretive resources that actors have on hand to pursue certain types of objectives, the more likely they are to succeed in structuring the institutional void in certain directions.

6.2.2 Central government must be responsible for its own contradictory policies

Evaluations of policy design should also consider the expected outcomes of the suite of government policies affecting environmental benefits and harms. While the fifth National government deserves credit for attempting a whole-of-government approach to freshwater reform, it deserves criticism for its ‘wadeable’ aspirations for water quality and its deceptive marketing of swimmability (see Chapter 2). More than this though, the specifics of National’s whole-of-government also approach merit analysis and critique. It could be argued that the pro-agriculture fifth National government – which promised to double agricultural exports by 2025 – was talking out of both sides of its mouth when it promised in 2017 that 90% of New Zealand’s rivers would be swimmable by 2040. To be fair, they channeled tens of millions of dollars of public science funding into the Our Land and Water National Science Challenge which was tasked to ‘enhance primary sector production and productivity while maintaining and improving our land and water quality for future generations’ (www.ourlandandwater.nz). This was a massive public subsidy applied to ensuring the continued profitability of agricultural industry, and the Challenge might have helped to reconcile the competing objectives, but there is no evidence that the Challenge has revolutionized agriculture and placed us on track to doubling exports while increasing swimmability. Crucially, it does not appear that the government undertook any modeling (as the Parliamentary Commissioner for the Environment had done, PCE, 2013, 2015) to consider how their own policies regarding economic production would affect future land use change and water quality. Compounding this, the government added economic analysis requirements

to the RMA, added specific economic policy objectives (including jobs) into the 2017 NPSFM, and enacted in 2016 the Nation Policy Statement on Urban Development Capacity which required urban councils to free up land for housing and rapid development with no clear reference to how environmental objectives should be considered in this process.

In these ways, the National government set into play a series of contradictory policy objectives which regional councils would have to reconcile in practice. By decentralizing the implementation of the NPSFM, the government effectively (and conveniently) shifted responsibility and blame for the implementation outcomes of these policies to regional councils. Central government could make bold assertions about growing the agricultural sector one day, and creating swimmable rivers another day, without ever being held accountable for the inherent trade-offs required to realize either. Most regional council staff vented frustration with being buried under layers of competing policies and objectives, and many MfE officials even recognized this (though they could do very little about it). One consultant recalled communicating their concern regarding the Urban Capacity policy statement to Minister Smith, who apparently listened and acknowledged these tensions. Why did nothing come of such acknowledgement? We may never know. Perhaps Smith and cabinet wanted to prioritize housing and urban development over environmental objectives, and didn't care about any perceived contradiction. Perhaps Smith tried and failed to convince cabinet to alter the urban policy. Or perhaps Smith genuinely believed the urban policy posed no contradiction at all and that regional councils would resolve any inconsistencies. Whatever happened, the lesson is clear: in the same way that regional councils are held accountable for whether their plans can realize their stated environmental objectives, so too should the national government in power.

6.2.3 There are multiple ways of resourcing the policy implementation regime

The New Zealand experience allows us to consider alternative resourcing regimes for decentralized policy implementation. The continuing barrage of new policy requirements

upon regional councils imposes significant costs that should be borne equitably between central and regional government. From our journey following the NPSFM implementation to date, central government keeps adding costs to councils while only providing very minor in-kind support. MfE is not allowed to provide functions that councils 'should be doing themselves' (see Chapter 3) such as assembling evidence, soliciting the values of community, and writing and defending plans. That said, the government passed the NPSFM first in 2011, significantly revised it in 2014, and then added further reporting requirements in 2017. All signals point to the new Labour government enacting a revised NPSFM within their term as well, continuing the trend of imposing further requirements to regional councils without resourcing them to undertake these new tasks.

When Hawkes Bay was over halfway through their collaborative process to implement the 2011 NPSFM, the 2014 NPSFM was enacted. The collaborative group then had to go back and revisit their objective-setting work to align with the categories and requirements of the revised policy. The National Objectives Framework introduced in the 2014 NPSFM has required huge infrastructural investments by councils who must make complex trade-offs about where to locate monitoring sites and why (HBRC-6a, 2016, NRC-6a, 2016). Yet the wheels have not stopped turning: the 2017 NPSFM added a requirement for councils to measure an ecological index at these sites, and the new Minister for the Environment David Parker (2018b) has signalled that his ministry is reviewing the 'appropriateness of the current chemical attributes and levels in the National Objectives Framework'. The 2017 NPSFM also requires regional councils to measure and report on the swimmability of rivers above a minimum size. For regional councils, the revision of the NPSFM every three years has added layers and layers of costs, which may lead to the fatigue of embedded actors and a retreat to conservative and minimal interpretations of policy requirements. In this light, Minister Parker's signalled revisions to the National Objectives Framework will add yet another layer of implementation costs, as will the compulsory use of a standardized mechanism for nutrient and/or sediment allocation.

While the Water Directorate within MfE secured several millions of dollars' worth of budget for implementation support, much of this 'soft' support has exacerbated the already-strained workloads of bricoleurs within councils. Councils usually only have a small number of water policy staff, and while the proliferation of MfE guidance, co-design forums, and projects may be useful for these staff, such initiatives also consume valuable time and energy. Further, because all guidance material is 'soft' and much of it can (and has) been overturned by the next iteration of the NPSFM, these resources are of limited utility for convincing conservative council managers to undertake costly or 'risky' ventures in democratic planning. This strain on local policy personnel is compounded further when you consider that freshwater is only one item in the policy agenda; a National Policy Statement for biodiversity is already in development, and the sixth Labour government has indicated a desire to pass new climate change legislation in the next year or two. These will create new and urgent requirements upon regional councils – exacerbating staff strain – and will likely involve a reallocation of resources and political energy toward a formal implementation response to those issues.

Against this history, it is worth considering how resourcing for decentralized freshwater policy implementation might be (or might have been) organized differently. There must be a better way of supporting regional councils to make their tasks easier. Proliferation of soft guidance is not useful when such guidance quickly becomes irrelevant in the face of policy revision. I would encourage the government and MfE to consider creative ways of resourcing councils to undertake new central-government tasks. One strategy might be to centrally fund key tasks that are necessary for the implementation of new policy requirements. As an empirical example, one council bureaucrat told me that they wished MfE had funded a centralized hub of economic experts that regional councils could draw upon in their planning processes. This would have significantly simplified the task for regional councils and allowed them to spend their expertise and personnel on other aspects of the policy. A second strategy, suggested by the Land and Water Forum, is to place land and water regulation and administration into the hands of an independent, national regulatory body such as a Land and

Water Commission (LAWF, 2010, 2018). That body could receive centralized funding for its operations rather than being tethered to regional property tax revenue, and could draw from its own pool of specialized expertise to develop and recommend plan changes. A third strategy, which an MfE colleague told me was actually considered by Minister Smith during the early 2010s, could be for central government and MfE to work with councils one-by-one to provide personnel and expertise for councils to undertake major new planning processes to meet the requirements. This way central government could become more accountable for specific regional environmental outcomes, and would have to face the contradictions contained within its competing policies in multiple domains.

These strategies are just some ways in which the implementation of decentralized environmental policy might be reconfigured. While no governance arrangement will provide a silver-bullet for problems of resourcing, multiple objectives, and strained implementation agencies, alternative approaches to decentralization nevertheless deserve exploration and interrogation. This is especially the case if environmentally-minded governments want councils to implement their policies with gusto and with certain environmental and democratic objectives in mind.

6.3 Future directions: seizing the politics of environmental decentralization

As environmental science tells us more and more about the nature and extent of human impacts on the biosphere, new environmental objects will be developed and promoted to coordinate environmental governance. The churn of policy ideas will continue and policy makers will continue to value newness and novelty (e.g. Peck and Theodore, 2015). With this churn, I argue, comes opportunity. The decentralization of environmental governance generates new forums and ways of struggling over the nature of economic and environmental development from within and beyond the state. Understanding the qualities of these forums and their modes of influence can be enhanced by future research in multiple national contexts, addressing different environmental concerns, and from a full gamut of perspectives,

especially indigenous environmental governance. In addition to a broad comparative gesture, a series of more specific research questions arise.

6.3.1 How can civil society shape the policy concepts of the state?

The rise of ‘swimmability’ discourse in New Zealand emerged in response to the ‘wadeable’ ambition of the fifth National government in 2014 (see Chapter 2). In 2017, that same government enacted a target for 90% of rivers to be swimmable by 2040. Notwithstanding debates about the definition of swimmability, this is clearly a case where public agitation, led by environmentalists, forced the state to adopt a new concept and policy priority.

Interestingly, the sixth Labour government have indicated a preference to keep the swimmability framework, while revising the definition of swimmability. In this case, the movement for swimmability has effectively realized a new infrastructure for environmental reporting that may change the face of environmental politics in the future. In what other contexts have civil society concepts become mainstreamed into government policy, how, and with what effects? What is gained by institutionalizing concepts like ‘swimmability’ into the state apparatus, and what is lost?

6.3.2 Can the bureaucracy be radicalized, and if so, how?

Demystifying the bureaucracy through empirical research is a first step toward a larger goal of engaging it politically. Bureaucrats operate within conditions of constraint and hierarchical steering, but they have agency as well. Understanding the nature of this agency in different bureaucracies and national settings remains an important area for future inquiry. In some contexts state bureaucrats may have significant capacities for action (as in Sweden, e.g. Hysing and Olsson, 2018), whereas in other contexts such as the U.S. prospects for engagement within the state bureaucracy appear to be far more constrained (e.g. Bomberg, 2017; Faber et al., 2017). In Aotearoa New Zealand there seem to be substantial opportunities within the bureaucracy to build projects with meaningful environmental and decolonizing

objectives, though these must be pursued within the bridging concepts and budgetary priorities of the government of the day. Theoretical and methodological tools from anthropology provide valuable resources to help understand how bureaucracies actually function, and how they might function differently.

6.3.3 Can decentralization be used to reclaim development for communities?

Many environmental and democratic outcomes of decentralization still need to be fought out on the ground. Critical policy scholars and urban geographers have increasingly identified local government as an important site for reclaiming urban development for the broad interests of communities over the narrow interests of capital (Blanco et al., 2014; Newman, 2014). This movement sees local government as a key site of resistance to the uncaring imperatives of profit, and an important juncture at which policies from elsewhere can be refracted through a lens that prioritizes social redistribution, meaningful participation, and shared prosperity. Future studies of environmental decentralization should consider how new policy responsibilities can be refracted and (if needed) repurposed to develop an inclusive and deliberative local democracy. Key aspects of this agenda include i) identifying and valuing the multiple local objectives of policy implementation, and ii) working with bricoleurs to craft and legitimize progressive policy implementation experiments.

6.3.4 How are intermediaries transforming environmental democracy?

My analysis of intermediaries, while fruitful, was only exploratory. We need to understand much more about the diversity of non-state actors such as intermediaries in the policy process, as well as their modes of influence and relative capacities for influencing central and local government trajectories. Empirical research could examine a more representative sample of intermediaries from different political interests in freshwater or another realm of environmental policy, to identify their key allies, strategies, and mechanisms of influence. In New Zealand research could examine how Māori intermediaries, industry-linked

intermediaries, and environmental groups, for example, possess different organizational capacities and thus prioritize certain types of strategies. In contrast, consultants and researchers may have different roles and strategies in the implementation process. A fuller mapping of the ecosystem of intermediaries in environmental policy could enable a more rigorous assessment of whether and how intermediaries are shaping implementation in favor of public and private interests. Research could also examine the genealogies of intermediaries within a particular geographical setting and their styles of influence in different decision contexts. More broadly, this could inform an agenda that seeks to amplify the policy work of progressive intermediaries, and embed this in local settings. To ensure that new arenas of decision making are not simply co-opted by elite interests, researchers can investigate how intermediaries' contributions are strengthening and/or weakening the environmental public interest in local and national settings, generating evaluations of intermediaries' changing influence.

6.4 Politicizing decentralization as a project for geographers

The meanings and effects of environmental policies are always in-the-making. When we recognize policies as provisional texts, we open ourselves to the possibility of making environmental policies mean and do different things. Popular environmental policy concepts like 'ecosystem services', 'resilience', and 'natural capital' may have neoliberal connotations, but assuming that their effects are predetermined by the logics of neoliberalism would be to forgo their progressive possibilities and find space for further politics. In this final section, I reflect on different ways in which geographers can contribute to structuring the institutional void of environmental policy, including through research, activism, and pedagogy.

This dissertation demonstrates how geographers can contribute to understanding the politics of decentralization by studying it critically and in ways that make visible the progressive actors and values at play in the struggle to structure the meaning of policy concepts. By explaining bureaucratic action and local implementation in empirical detail, and by

conducting situated political evaluations of these activities, we can identify key axes of debate over policy meanings and identify relevant actors and coalitions in these debates. We can begin to 'see' projects and practices that may have progressive qualities or potentials, even if these are currently constrained or otherwise underexplored. As researchers, we can also generate and circulate progressive narratives of 'successful' policy designs and governance experiences, which can contrast with dominant state narratives of 'success'.

Geographers can also engage in activism. With environmental and community groups, we can promote or critique policy categories and make demands upon the state 'from the outside'. Within New Zealand, this dissertation identifies opportunities to collaborate with local bricoleurs, offer expert advice to central and local government, and contribute to shaping the developmental narratives of industry, environment, infrastructure, and democracy. We can provide evidence and legal reasoning to local and central governments, and we can critique the evidence and arguments provided by others. We can help to find and network allies across central, local, and non-government sectors to share policy ideas, build shared strategies, and alter the interpretive context of environmental policy (Routledge et al., 2018).

Finally, perhaps geographers have the most to contribute to reclaiming the politics of environmental decentralization through their roles as pedagogical actors. In New Zealand at least, many geography graduates end up working in local or central government, as well as in research and consultancy firms. As this dissertation shows, these actors have significant abilities to craft, enable, justify, and undertake efforts to rewire environmental democracy. Geographers work as bureaucrats (I counted at least half a dozen on one floor at MfE), as council staff scientists, planners and managers. Key questions that this raises for me include: how are we teaching students to conceptualize and enact institutional politics within these settings? Do we teach students that the struggle for policy is 'back there' (in the writing of policy), or 'out there' (among powerful factions and electoral democracy) or 'up there' (in the organizational hierarchy)? It strikes me that on this point we have the most to gain from

embracing more 'open' and nuanced approaches to understanding the politics of environmental decentralization.

Post-script: New Zealand freshwater policy post-2017

The events surrounding New Zealand's September 2017 election were surprising and extraordinary. While they merit a multifaceted analysis (e.g. see Vowles, 2018), this post-script focuses specifically on the fate of freshwater policy moving forward.

In mid-2017, most political analysts – myself included – expected the 2017 election to be a relative shoo-in for the incumbent National government. National enjoyed the consistent support of 45% of the population in the polls, whereas Labour's support had sunk below 30%. As Labour's support slid to a record low of 24% in late July (worse even than the 2014 election), Andrew Little stood down as leader of the party, and was replaced by his popular and articulate 37-year old deputy, Jacinda Ardern. Ardern's energy and positivity mobilized many young people to support Labour (see Vowles, 2018), and she used her platform to raise issues of homelessness, child poverty, housing, climate change, and freshwater to the top of the political agenda. Between July and September 2017, Labour's support rose from 24% to well over 35%, and in one poll even surpassed National (see Cowlshaw and Hickey, 2017). At the election, Labour received 36.9% of the party vote to National's 44.4%, but with the Green Party's 6.3% the left and right blocs were nearly even. After a month-long process of coalition negotiations, the populist New Zealand First Party placed its 7.2% of the electoral vote behind a Labour coalition, and on 19 October the sixth Labour-led government was announced.

In July 2017, prior to 'Jacindamania' (Kwai, 2017) and the election, a coalition of environmental and industry organizations proposed a seven-step Freshwater Rescue Plan to influence election policy platforms regarding freshwater. This unprecedented initiative emerged from a frustration with the incumbent government as well as the ineffectiveness of Land and Water Forum mechanism to secure strong environmental protection (see Mitchell, 2017). The Rescue Plan called for a strengthening of environmental standards beyond current levels, a withdrawal of all public subsidies for irrigation, the creation of an agricultural

transition fund to support land use change, immediate reduction in cow numbers, deploying a polluter pays system to reduce contamination, quarterly reports on water management progress by regional councils, and the creation of a whole-of-government vision for a low carbon, green economy.

In a widely applauded speech to the Environmental Defence Society's conference on 8 August, Jacinda Ardern introduced Labour's environmental policy platform, which included a strengthening of environmental standards and – most controversially – a tax on water extraction. She and Labour emphasized that the proposed tax would be small for agricultural producers but significant for water bottling exports; however, many from agricultural industry, the political right, and the rural sector – including leader of NZ First Winston Peters – criticized the tax as an unfair burden. Labour also promised that within its first 100 days in office it would hold a 'Clean Water Summit' to discuss its freshwater policy platform with affected interests (New Zealand Labour Party, 2017). As election debates raged in August 2017, the incumbent National government quietly released its revised version of the NPSFM (New Zealand Government, 2017) along with MfE's review of the NPSFM implementation (MfE, 2017e).

The sixth Labour-led government involves a formal coalition between Labour and NZ First, with the Green Party providing supply and confidence votes. As a condition of forming a government with Labour, NZ First required Labour to drop its planned tax on agricultural water extraction. David Parker was appointed Minister for the Environment, returning to the post which he had used to kick-start the drafting of the National Policy Statement back in 2007 (see Chapter 2). Immediately after the election Parker spent much time focusing on negotiating the Comprehensive and Progressive Trans-Pacific Partnership Agreement. Since April 2018 his attention has turned toward freshwater, and he has indicated an intention to reform the NPSFM.

Details on the sixth Labour government's freshwater policies remain somewhat vague, despite being over a year into their term. In October 2018, Minister Parker and MfE released a document titled *Essential Freshwater: Healthy Water, Fairly Allocated* (MfE, 2018b) to signpost the government's freshwater policy priorities. The document promises that "By 2020, new rules will be in place that will stop the degradation of New Zealand's freshwater," and that "In five years there will be a noticeable improvement in freshwater quality" (MfE, 2018b: p6). Six policy workstreams are outlined, which include (from MfE, 2018b):

1. Identifying at-risk catchments and targeting central government investment (e.g. tree planting, regulatory oversight) into ensuring these are turned around.
2. Amending the NPSFM to "ensure all aspects of ecosystem health are managed" (e.g. by adding new chemicals to the National Objectives Framework), and to "provide greater direction on how to set limits on resource use" (p13).
3. Creating a National Environmental Standard for Freshwater Management to regulate specific environmentally impactful activities, such as intensive winter grazing, and the use of feedlots.
4. Amending the Resource Management Act to "enable regional councils to review consents, to more quickly implement water quality and quantity limits as required in the Freshwater NPS" (p14).
5. Developing options for allocating nutrients (pollutants) and for allocating water use, in ways that are fair to future as well as past users.

This agenda is notable for what it includes – setting nutrient limits through a standardized method, stopping further degradation – as well as what it does not. For example, the government has made no mention of embedding, evolving, or expanding the use of collaborative processes for freshwater management, nor has it addressed the issue of Māori rights and interests in freshwater. During the lead up to the election, Labour promised to allocate its proposed agricultural water tax revenue between regional councils and local

Māori iwi to restore the health of the environment. Since the coalition agreement with NZ First axed the water tax, however, it is unclear what the government will do. Parker has previously rejected “the notion that Māori have a greater environmental interest than... other people” (Parker, 2016), and Moir (2018) reports that within the government Parker has been challenged on this issue by Crown/Māori Relations Minister Kelvin Davis and others. In a much-anticipated speech at the Environmental Defence Society in August 2018, Parker announced the government’s intention to establish a Māori Freshwater Forum to engage with the Crown and advise upon freshwater reform. This group will be larger than the Iwi Chairs Forum, drawing its representation ‘from different areas of Māoridom’ (Parker, 2018a). The Iwi Chairs Forum have criticized the government for sidestepping them for a substitute Forum whose representatives will be solely appointed by the Crown (rather than appointed by Māori). The Iwi Chairs Forum argue that this does not reflect the principles of partnership as guaranteed in the Treaty of Waitangi (Radio New Zealand, 2018a).

To revisit the coordinating concepts developed in Chapter 2, then, recent events suggest that the freshwater policy conversation is shifting in several ways:

- **Rights and interests** – since the water tax solution was taken off the table by NZ First, it is unclear whether and how this government will address Māori rights and interests in freshwater. The Māori Freshwater Forum will expand the Crown’s engagement with Māori, but the issue of ownership has not been placed within the remit of this group. However, Parker (2018a) is keen to explore how the development potential for currently under-developed Māori land could be treated on equal terms to more intensified land (e.g. intensive dairy farming) within the limit-setting framework. Put differently, this appears to be about ensuring a ‘right to develop’ for Māori.
- **Limits** – MfE is considering how sediment and nutrient limits can be set across all regions through a standardized mechanism. This is a much more centralized approach

than the previous government, which left 'limits' to be interpreted by regional councils (2011 NPSFM) and subsequently required limits to be set for specified attributes (2014 NPSFM). While the Land and Water Forum failed to find agreement on a standardized mechanism for nutrient allocation, MfE (2018b) has stated an intent to allocate nutrients.

- **Local and national values** – 'national values' are being further prescribed by central government. Parker has indicated that a revised NPSFM will likely contain new standardized measures in relation to halting certain forms of agricultural intensification, and that he will also add to and strengthen the environmental bottom lines in the existing National Objectives Framework.
- **Collaboration** – while fostering collaborative capacity remains important for regional councils and civil society, Parker has not mentioned collaboration in any of his speeches, and it does not feature as a policy area in *Essential Freshwater*. Since the Land and Water Forum has now disbanded, perhaps leadership on collaboration may come from regional councils and the research sector, but it appears to not be a priority for this government.
- **Swimmability** – despite criticizing the National government's swimmability targets as flawed, Parker has indicated a desire to preserve the swimmability targets framework. Parker has indicated a preference for revising the definition of swimmability and requiring regional councils to report swimmability information more often.

In sum, then, the sixth Labour-led government's approach to freshwater policy involves a strong recentralization of decision making to the central state. This will be enacted through standardizing planning rules and limits frameworks across the board. Unlike the fifth National government, this Labour-led government is focusing investment on at-risk catchments, and thus is taking some responsibility for turning around environmental outcomes for specific rivers and places. As indicated above, new layers of regulatory requirements appear to be on the horizon for regional councils – more ecological attributes to

measure, stronger targets to achieve, designated frameworks for setting limits, rules to regulate designated land use practices in specified ways, and rules to cap intensification. All of this is to be layered upon the previous requirements. Previous, collaboratively-set limits may need to be revised, new monitoring infrastructure must be built, and council operations must be reprioritized again toward compliance with national requirements. In other words, there are many new responsibilities for councils to undertake, but no new resourcing with which to undertake them. Some in-kind support may be provided to councils dealing with at-risk catchments, but otherwise it appears expected that councils must go through another round of planning for compliance's sake.

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Appendices

Appendix 1. Consent Form for Ministry for the Environment Participants

Structuring the field of environmental governance: tracing the 'collaborative turn' in New Zealand's freshwater management

Primary Investigator:
Dr. Trevor Barnes
Department of Geography
University of British Columbia
1984 West Mall
Vancouver, BC V6T 1Z2

Co-Investigator:
Marc Tadaki
Department of Geography
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1984 West Mall
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This research is part of the Co-Investigator (Marc Tadaki)'s PhD dissertation. As such, some results may become part of a public presentation or publication.

Purpose:

This research will examine the processes shaping the implementation of the National Policy Statement-Freshwater Management (2011, updated 2014) in New Zealand. The aim of this part of the research is to develop an account of how the Ministry for the Environment is undertaking strategic programs of work in order to support the implementation of the National Policy Statement. You are being asked to participate in this study because your expertise, observations, and experiences are important sources of information about the National Policy Statement and the changing context surrounding its implementation.

Study Procedures:

If you agree to participate in this study, the Co-Investigator, Marc Tadaki, will observe and participate in your professional activities at your organization of employment. The study will take place over a period of five weeks, from 15 February 2016 until 18 March 2016. The goal is to allow Marc to develop a detailed understanding of your organization's work and projects. During the study period Marc may engage you in discussion related to your expertise and/or reflections on your professional activities. Marc will play non-disruptive role in your professional activities. Marc will attend meetings and informally converse with you and other colleagues within the Ministry for the Environment water policy implementation team.

Marc will be taking written notes based on his experiences within the Ministry for the Environment, including notes based on meetings and from formal and informal conversations about policy implementation.

You will not be identified by name in the written notes or any reports of the completed study. If you are quoted or paraphrased, a pseudonym will be used and your organization and broad area of expertise may be noted if appropriate.

Results:

The results of this study will be part of Marc Tadaki's PhD dissertation and future publications. The final write-up will be provided to you upon request.

Potential Risks:

There are no foreseen risks to participating in this study beyond those found in everyday life.

Potential Benefits:

This study provides an opportunity to share your knowledge and perspectives relating to challenges and opportunities of implementing water policy in New Zealand. The results of the study will contribute toward

understanding the big picture of water and environmental governance in New Zealand and internationally. Your contributions will inform and enrich the analysis and recommendations for future practice that emerge from the study.

Confidentiality:

All documents will be encrypted, identified only by code number and kept in a locked filing cabinet or on a password-protected computer. Only the investigators noted on this document will have access to the data.

You will not be identified by name in the written notes or any reports of the completed study. If you are quoted or paraphrased, a pseudonym will be used and your organization and broad area of expertise may be noted if appropriate.

Remuneration/Compensation:

We cannot offer any financial remuneration for your participation in this study; however we hope that the knowledge shared will provide a benefit to your organization.

Contact for information about the study:

If you have any questions or desire further information with respect to this study, you may contact Marc Tadaki by email at marc.tadaki@geog.ubc.ca, or by writing to the address above. H

Contact for concerns about the rights of research subjects:

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

Participant Consent:

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without consequence. Your signature below indicates that you have received a copy of this consent form for your own records. Your signature also indicates that you consent to participate in this study.

Participant Signature

Date

Printed Name of the Participant signing above

Appendix 2. Consent Form for Interview Participants

Structuring the field of environmental governance: tracing the 'collaborative turn' in New Zealand's freshwater management

Primary Investigator:
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Who is undertaking this study?

This is the doctoral research project of Marc Tadaki, who is currently a PhD Candidate in the Department of Geography at the University of British Columbia. Marc is a New Zealander and has been studying New Zealand's freshwater planning processes since 2011. This research will be a part of Marc's PhD dissertation, and as such some results may become part of a public presentation or publication.

What is the purpose of this study?

This research will examine how the National Policy Statement for Freshwater Management (NPS-FM, 2011 and updated in 2014) is being implemented across New Zealand, and how state and non-state actors are attempting to shape these implementation processes, both locally and at-a-distance.

Policy implementation is often understood in terms of success or failure, relative to the intent of the policy itself. When a policy is not implemented as envisioned, this is often seen as a negative 'gap' that needs to be addressed through either supportive or disciplinary action from the central state. Often, however, there are valid reasons that implementation does and should take different forms in different contexts.

This research seeks to open up and enrich thinking beyond traditional understandings of implementation 'success' and 'failure'. It seeks to explore the diverse outcomes that emerge through differences in implementation, and consider how policy 'success' and 'failure' might be re-defined in order to reflect this understanding. The study will consider how freshwater planning reforms are providing opportunities and constraints for pursuing different styles of democratic experimentation in different places.

How is the study being conducted?

The present portion of the study involves interviews with water policy experts about the history, meaning, and implementation of the National Policy Statement on Freshwater Management.

If you agree to be interviewed, you will participate in a thirty to ninety-minute interview with Marc Tadaki, at a location of your choice. You will be asked to relate your perspective on the national and local aspects of the way the NPS-FM is being implemented. If there are significant NPS-FM developments following your interview, you may be invited to participate in a subsequent follow-up interview.

With your permission, the interview will be digitally recorded and then transcribed to ensure that views are accurately recorded. If you do not want the interview to be recorded, the interviewer will take written notes. Recordings will be transcribed by either the researcher, or a transcriber who has signed a confidentiality agreement.

The results of this study will be part of Marc Tadaki's PhD dissertation and future publications. The final write-up will be provided to you upon request.

Will participating in this study affect you in any way?

Taking part in this study will not directly affect participants or their work. However, by developing an account of the NPS-FM implementation and interviewing related individuals, I hope to provide insights that will be of use to water policy professionals in New Zealand (including those who have participated in the study), and beyond. These insights may be particularly useful for the Ministry for the Environment, local governments and other stakeholders as a resource that can inform future policy developments.

How will your identity be protected?

All documents will be encrypted, identified only by code number and kept in a locked filing cabinet or on a password-protected computer. Only the investigators noted on this document will have access to the data.

You will not be identified by name in the recording, interview transcript, or any reports of the completed study. If you are quoted, a pseudonym will be used and your organization and broad area of expertise may be noted if appropriate.

Who can you contact if you have questions about the study?

If you have any questions or desire further information with respect to this study, you may contact Marc Tadaki by email at marc.tadaki@geog.ubc.ca, or by writing to the address above.

Contact for concerns about the rights of research subjects:

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail RSIL@ors.ubc.ca or call toll free 1-877-822-8598.

Participant Consent:

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without consequence. Your signature below indicates that you have received a copy of this consent form for your own records. Your signature also indicates that you consent to participate in this study.

Participant Signature

Date

Printed Name of the Participant signing above